

## The Next Generation of the Penn World Table<sup>†</sup>

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*We describe the theory and practice of real GDP comparisons across countries and over time. Version 8 of the Penn World Table expands on previous versions in three respects. First, in addition to comparisons of living standards using components of real GDP on the expenditure side, we provide a measure of productive capacity, called real GDP on the output side. Second, growth rates are benchmarked to multiple years of cross-country price data so they are less sensitive to new benchmark data. Third, data on capital stocks and productivity are (re)introduced. Applications including the Balassa-Samuelson effect and development accounting are discussed. (JEL C43, C82, E01, E23, I31, O47)*

For over four decades, the Penn World Table (PWT) has been a standard source of data on real GDP across countries. Making use of prices collected across countries in benchmark years by the International Comparisons Program (ICP), and using these prices to construct purchasing-power-parity (PPP) exchange rates, PWT converts gross domestic product (GDP) at national prices to a common currency—US dollars—making them comparable across countries. Previous versions of PWT, each based on a newer ICP benchmark, were described extensively by their originators (Summers and Heston 1988, 1991; Heston and Summers 1996). From version 8 onward, development has moved to the University of California, Davis and the University of Groningen, while retaining the PWT initials and with continued input from Alan Heston at the University of Pennsylvania.<sup>1</sup> In this paper we describe the main changes to the measurement of real GDP that have been introduced in this “next generation” of PWT.

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<sup>1</sup>PWT version 7 is based on the 2005 ICP prices. PWT version 8.1 is still based on the 2005 benchmark but has new features described in this paper, and is available online at: <http://www.rug.nl/research/ggdc/data/pwt/>. Version 9 will be based on the new ICP 2011 benchmark that became available in 2014.

Most importantly, we distinguish whether real GDP is intended to measure the standard of living across countries or to measure productive capacity. As argued by Feenstra et al. (2009), real GDP in previous versions of PWT, or its components such as consumption or domestic absorption, was intended to measure the standard of living across countries. They refer to this concept as “real GDP on the expenditure side,” or real GDP<sup>e</sup>. This variable was close to what is called “command-basis GDP” in the United States. We contrast this concept with “real GDP on the output-side,” or real GDP<sup>o</sup>, which is intended to measure the productive capacity of an economy. Countries that have strong terms of trade—meaning higher than average prices for exports or lower than average prices for imports—will have higher real GDP<sup>e</sup> than real GDP<sup>o</sup> as a result. We have incorporated a new dataset of quality-adjusted prices of exports and imports so that both real GDP variables are now reported in PWT8.

Second, to hold prices constant over time, past versions of PWT relied upon real GDP growth from the national accounts for each country. That is, the level of real GDP across countries was constructed for the most recent ICP benchmark and then projected backward and forward in time by using national accounts growth rates for each country. That approach meant that past years of ICP data were discarded. In PWT8 we likewise include a variable that uses real GDP growth from the national accounts, but we further introduce measures of real GDP that correct for changing prices over time and use ICP benchmarks from *multiple years*. All of these measures of real GDP in PWT8 resolve the problem noted by Johnson et al. (2013) that, in past versions, growth rates were dependent on the benchmark year of ICP data used in PWT.

Third, we reintroduce measures of the capital stock across countries based on data of investment by type. They are used in conjunction with measures of human capital to provide, for the first time, measures of total factor productivity across countries. New data on labor income shares in GDP allow factor substitution elasticities to differ across countries and over time. This opens the possibility of analyzing the proximate sources of differences in productivity and living standards across countries.

The paper is organized as follows. In Section I we provide a guided tour to the new PWT, highlighting the main sets of variables, briefly discussing their construction and indicating areas of research where they can be useful. Compared to previous PWT versions, PWT8 allows us to forge a much closer link between the variables in PWT and the theoretical concepts of welfare and production in the literature. In Sections II–IV we describe this theory behind real GDP comparisons. We use a familiar model with traded and nontraded goods, whereby more technologically developed countries have higher prices for nontraded goods: this is the Balassa-Samuelson effect (Balassa 1964, Samuelson 1964), or “Penn effect” (Samuelson 1994). In this context, we argue that it is highly misleading to use a single good—even a traded good—as numeraire to measure “real” GDP. If the law of one price holds, then that approach is equivalent to deflating GDP across countries using their *nominal* exchange rates, and will give a biased measure of the standard of living or productive capacity across countries. Instead, real GDP must be measured by holding the entire vector of prices constant across countries and over time, and we discuss practical ways to achieve that end. In Section II we discuss comparisons of real

expenditure, while Section III covers measurement of real output across countries and over time. In Section IV we outline the measurement of total factor productivity.

In Section V we discuss computational issues within PWT8 and show how the concepts discussed in the theoretical sections are empirically implemented. It reviews our approach of dealing with multiple ICP benchmarks and how we incorporate quality-adjusted prices of exports and imports from Feenstra and Romalis (2014), needed to compute real GDP<sup>o</sup>. Core details on the construction of capital stock and productivity measures are provided. To illustrate potential uses of the new PWT data, three applications are presented in Section VI. We show the differences between real GDP<sup>e</sup> and real GDP<sup>o</sup> and explain this gap based on familiar relationships in the literature. We also document how the new measures of factor inputs and productivity can explain more of the cross-country variation in real GDP per capita than standard approaches in the literature. Finally, we show that our use of multiple ICP benchmarks has important implications for estimating the Balassa-Samuelson effect, the positive relationship between a country's relative price level and its income per capita. Section VII concludes and the (online) Appendix contains the proofs of our theorems and further details on the calculation of variables in PWT8.

### I. A Guided Tour of PWT8

What is “real” GDP? In macroeconomics, this concept means GDP evaluated at constant prices over time. Likewise, for international comparisons research, real GDP means GDP that is evaluated at constant prices across countries. It is not enough to hold just one price constant across countries (i.e., to have a numeraire such as a traded good), but it is essential to hold *all* prices for goods and services constant across countries when evaluating real GDP. This is the basic approach taken in the PWT since its inception. Up to version 7, PWT used information on relative prices of consumption and investment from ICP that allowed for the measurement of relative standards-of-living across countries. For PWT8, we have developed new data that allow us to also provide measures on relative productive capacity across countries. Combined with new data on capital and labor input, cross-country comparisons of productivity can be made as well. In this section we outline the main variables in PWT and their uses, and provide pointers to more detailed discussions in the remainder of the paper.

An important distinction is between GDP measured from the expenditure side and the production side. Traditionally, PWT measured GDP from the expenditure side, and in earlier versions this was the *only* measure of real GDP. It was constructed as nominal GDP, deflated by the relative price level for domestic absorption.<sup>2</sup> To achieve this, the ICP would collect detailed data on consumer expenditures as well as the prices for those expenditure categories, and by dividing expenditures by prices it obtained the consumption quantities relevant to the standard of living. In conjunction with the prices and quantities of investment goods and government expenditures, also collected by the ICP, real GDP from the expenditure side was

<sup>2</sup>In the US National Income and Product Accounts, a comparable measure is referred to as “command-basis GDP.” Command-basis GDP is obtained by deflating nominal GDP by the price index for gross domestic purchases. See equation (16) for the comparable definition of expenditure-side real GDP in PWT.

computed. In PWT8 we refer to this real GDP concept as  $GDP^e$  to distinguish it from real GDP measured from the production side. This emphasis is important because PWT8, for the first time, includes output-based real GDP, or real  $GDP^o$ .

Output-based real GDP was previously not feasible because its computation requires not only relative prices of consumption and investment, but also of export and imports. Incorporating such data is challenging as there is no cross-country survey that collects prices for traded goods of comparable quality across countries, as the ICP does for consumption and investment products. Instead, we are forced to start with the unit values of traded goods. A recent body of research in international trade shows how to correct these unit values for quality, thereby obtaining quality-adjusted prices across countries, as in Feenstra and Romalis (2014).<sup>3</sup> Dividing export and import values by these prices we obtain quality-adjusted quantities, which are treated as outputs and inputs, respectively, to production and to the construction of output-based real GDP. Real  $GDP^o$  can be used to compare the productive capacity across countries in a given year and will typically be different from real  $GDP^e$  as countries face differing terms of trade; see Feenstra et al. (2009) and Section V for more.

A second important distinction between various sets of variables in PWT is whether they are constructed holding prices for goods and services constant across countries *as well as over time*, or not. This distinction leads to the following two definitions of real GDP as appear in PWT8: real GDP using prices that are constant across countries but depend on the *current year* (variables  $CGDP^e$  and  $CGDP^o$ ); and real GDP using prices that are constant across countries and are also *constant over time* ( $RGDP^e$  and  $RGDP^o$ ). We prefix the first concept by *C* because it uses prices in the *current year*: this concept is sometimes called “current-price” real GDP in the literature on international comparisons. It is straightforward to correct this concept for inflation in the United States, but it is not purely real since the vector of (reference) prices at which GDP is evaluated can change over time. Accordingly, the *C* variables are best-suited for comparisons across countries in a particular year. We prefix the second concept by *R* because it also holds prices constant over time and therefore corresponds to what economists normally think of as “real”: this concept is sometimes called “constant-price” real GDP. The *R* variables are well-suited for comparisons across countries and over time, e.g., the productive capacity of China’s economy today as compared to the US economy at some point in the past. By construction these two sets of variables are equal in the benchmark year 2005 ( $RGDP^o = CGDP^o$  and  $RGDP^e = CGDP^e$ ), but otherwise differ because the *C* variables are evaluated at different prices in other years. Sections II, III, and V provide more detailed discussions.

The key variables in PWT8.1 are shown in Table 1, where part A lists the “current-price” or *C* variables and part B lists the “constant-price” or *R* variables.<sup>4</sup> Focusing first on part A, the variable  $CGDP^e$  and its components (consumption, investment, and government expenditures) play an important role in measures of

<sup>3</sup> The starting point of this literature is that a good that is imported in high quantity but without having a low unit value must be of high quality: see Khandelwal (2010) and Hallak and Schott (2011). Feenstra and Romalis (2014) extend this demand-side measurement by also building in a supply side, as discussed in Section V.

<sup>4</sup> The variables *CCON*, *CDA*, and *CWTF* were not included in PWT8.0, but are newly added in PWT8.1.

TABLE 1—KEY VARIABLES IN PWT VERSION 8.1 AND THEIR USES

Acronym	Name	Units	Useful for comparing	See also
<i>Panel A. Based on prices that are constant across countries in a given year</i>				
$CGDP^e$	Expenditure-side real GDP, using prices for final goods that are constant across countries	Millions of 2005 US \$	Living standards across countries in each year	Section V
$CGDP^o$	Output-side real GDP, using prices for final goods, exports, and imports that are constant across countries	Millions of 2005 US \$	Productive capacity across countries in each year	Section III, V
$CCON$	Real consumption of households and government, using prices that are constant across countries	Millions of 2005 US \$	Living standards across countries in each year	Section II, V
$CDA$	Real domestic absorption, computed as real consumption ( $CCON$ ) plus real investment	Millions of 2005 US \$	Living standards across countries in each year	Section II, V
$CK$	Capital stock using prices for structures and equipment that are constant across countries	Millions of 2005 US \$	Capital stock across countries in each year	Section IV, V
$CTFP$	TFP level, computed with $CGDP^o$ , $CK$ , labor input data, and $LABSH$	USA value = 1 in all years	Productivity level across countries in each year	Section IV, V
$CWTFP$	Welfare-relevant TFP level, computed with $CDA$ , $CK$ , labor input data, and $LABSH$	USA value = 1 in all years	Living standards across countries in each year	Section IV, V
<i>Panel B. Based on prices that are constant across countries and over time</i>				
$RGDP^e$	Expenditure-side real GDP, using prices for final goods that are constant across countries and over time	Millions of 2005 US \$, $RGDP^e = CGDP^e$ in 2005	Living standards across countries and across years	Section III, V
$RGDP^o$	Output-side real GDP, using prices for final goods exports and imports that are constant across countries and over time	Millions of 2005 US \$, $RGDP^o = CGDP^o$ in 2005	Productive capacity across countries and across years	Section III, V
<i>Panel C. Based on national prices that are constant over time</i>				
$RGDP^{NA}$	Real GDP at constant national prices, obtained from national accounts data for each country	Millions of 2005 US \$, $RGDP^{NA} = CGDP^o$ in 2005	Growth of GDP over time in each country	
$RCON^{NA}$	Real household and government consumption at constant national prices	Millions of 2005 US \$, $RCON^{NA} = CCON$ in 2005	Growth of consumption over time in one country	
$RDA^{NA}$	Real domestic absorption at constant national prices	Millions of 2005 US \$, $RDA^{NA} = CDA$ in 2005	Growth of domestic absorption over time in each country	
$RK^{NA}$	Capital stock at constant national prices, based on investment and prices of structures and equipment	Millions of 2005 US \$, $RK^{NA} = CK$ in 2005	Growth of the capital stock over time in each country	Section V
$RTFP^{NA}$	TFP index, computed with $RGDP^{NA}$ , $RK^{NA}$ , labor input data, and $LABSH$	2005 value = 1 for all countries	Growth of productivity over time in each country	Section V
$RWTFP^{NA}$	Welfare-relevant TFP index, computed with $RGDP^{NA}$ , $RK^{NA}$ , labor input data, and $LABSH$	2005 value = 1 for all countries	Growth of welfare-relevant productivity over time in each country	Section V

(Continued)

TABLE 1—KEY VARIABLES IN PWT VERSION 8.1 AND THEIR USES (*Continued*)

Acronym	Name	Units	Useful for comparing	See also
<i>Panel D. Other variables</i>				
<i>PL_CON</i>	Price level of <i>CCON</i> , equal to the PPP (ratio of nominal <i>CON</i> to <i>CCON</i> ) divided by the nominal exchange rate	USA value = 1 in 2005	How consumption price levels differ across countries	Section V
<i>PL_DA</i>	Price level of <i>CDA</i> and <i>CGDP<sup>e</sup></i> , equal to the PPP (ratio of nominal <i>DA</i> to <i>CDA</i> ) divided by the nominal exchange rate	USA value = 1 in 2005	How expenditure price levels differ across countries	Section V
<i>PL_GDP<sup>o</sup></i>	Price level of <i>CGDP<sup>o</sup></i> , equal to the PPP (ratio of nominal <i>GDP</i> to <i>CGDP<sup>o</sup></i> ) divided by the nominal exchange rate	USA value = 1 in 2005	How output price levels differ across countries	Section V
<i>LABSH</i>	The share of labor income of employees and self-employed workers in GDP	Fraction of nominal GDP	Total inputs across countries or over time	Section V

comparative living standards. PWT8 provides a number of alternatives. Jones and Klenow (2011) ask by how much consumption of a random person in the United States would have to be adjusted to make this person indifferent between living for a year in the United States or in another country. This involves taking into account differences between the two countries in the real level of consumption, but also in life expectancy, leisure, and income inequality. The relevant building block for such a “consumption-equivalent” welfare measure from PWT8 is real consumption, the sum of real household and government consumption, denoted by *CCON*.<sup>5</sup> Starting with this variable, we can add real investment to obtain *CDA*, and likewise adding the real trade balance we get back to *CGDP<sup>e</sup>* (the details of this calculation are in Section V). From the point of view of the representative consumer, *CGDP<sup>e</sup>* essentially treats the trade balance as an income transfer that is then deflated by the local prices, including prices for nontraded goods. *CGDP<sup>e</sup>* can be viewed as a measure of the standard of living, but extended to incorporate the real trade balance.

The new measure of productive capacity of an economy (variable *CGDP<sup>o</sup>*) is particularly relevant in studies that account for the proximate determinants of GDP levels, also known as development accounting, as in Hall and Jones (1999); Caselli (2005); and Hsieh and Klenow (2010). Its construction is discussed in detail in Sections III and V. PWT8 also provides new information on real inputs that enables one to compare total factor productivity (TFP) across countries. Measures of the capital stock are cumulated from series on investment in buildings and different types of machinery and converted with relative prices for structures and equipment that are constant across countries (variable *CK*).<sup>6</sup> New measures of labor input are provided as well, corrected for differences in schooling. In addition, we expand upon the work of Gollin (2002) and estimate the share of labor income in GDP that varies over time and across countries (variable *LABSH*, in part D of Table 1). Combining this with (more standard) measures of human capital, one can compare the *level* of

<sup>5</sup> As also argued in Jones and Klenow (2011), the dividing line between household and government consumption is very country-specific and based on the institutional details of how the education and healthcare systems are organized. A total consumption measure is thus the most relevant.

<sup>6</sup> Some earlier versions of PWT had also included capital stock information, but the current data have been newly developed for PWT8; see Section V and online Appendix C.



productivity across countries at a point in time (variable  $CTFP$ , with  $CTFP = 1$  for the United States). The new data on real inputs are relevant in accounting for productivity differences, as in Caselli (2005), but can also be used in constructing welfare-relevant TFP measures along the lines of Basu et al. (2014). They show that the welfare of a country's infinitely lived representative consumer is summarized, to a first order, by total factor productivity and by the capital stock per capita. To calculate this welfare-relevant TFP, they argue that a measure of real domestic absorption is needed which includes consumption as well as investment. This measure is called  $CDA$  in PWT8 and the TFP measure based on this is called  $CWTFP$ . Details are provided in Sections IV, V, and online Appendix C.

In past versions of PWT the growth rate of RGDP was computed solely based on the growth rate of real GDP—or its components—obtained from national accounts (NA) data.<sup>7</sup> In the PWT8 the measures of  $RGDP^e$  and  $RGDP^o$ , listed in part B of Table 1, are based on growth rates that are tied to *multiple* ICP benchmarks and correct for changing prices between these benchmarks. Because we interpolate between multiple ICP benchmarks, there is no guarantee that the growth rate of real GDP so obtained will necessarily be close to the NA growth rate.<sup>8</sup> We now indicate the real series with national-accounts growth rates with the superscript  $NA$ , so that  $RGDP^{NA}$  in PWT8 is based on those growth rates. We normalize it such that  $RGDP^{NA} = CGDP^o$  in the benchmark year 2005.<sup>9</sup> In all of our measures of real GDP, the growth rates will not change in between existing benchmark years as new benchmarks become available, unless the underlying nominal GDP data from the national accounts are revised.<sup>10</sup> This “invariance of growth rates between benchmarks” was not previously a feature of PWT—as discussed by Johnson et al. (2013)—which meant that ICP benchmarks often led to considerable changes in real GDP growth rates for all prior years. That deficiency is no longer the case in PWT8.

In addition we provide two new variables also based on national accounts growth rates. To measure capital stocks *over time* we include  $RK^{NA}$ , which is also computed based on cumulated investment in structures and equipment, but deflated with national prices that allow for a comparison over time. It is set equal to  $CK$  in 2005. The corresponding measure of productivity,  $RTFP^{NA}$ , is computed using the growth rate of real GDP from national-accounts data,  $RGDP^{NA}$ , in conjunction with the growth rates of  $RK^{NA}$  and the labor force, to obtain productivity growth rates for each country.  $RTFP^{NA}$  is normalized to 1 in 2005 for all countries; see Section V.

Finally, PWT8 provides various relative price levels, which equal the PPP exchange rate divided by the nominal exchange rate. These variables show how

<sup>7</sup> Up to version 6.1, the variable “rgdpl” in PWT relied upon a weighted average of the NA growth rates of the *components* of GDP, i.e.,  $C$ ,  $I$ ,  $G$ ,  $X$ , and  $M$ . The weights used depended on the ICP benchmark being used, leading to the criticism of Johnson et al. (2013). Beginning in version 6.2, a second real GDP variable “rgdpl2” was introduced that relied instead on the NA growth rate of total absorption, and therefore was not subject to that criticism.

<sup>8</sup> India, for example, is found to have a higher standard of living in its 1975 ICP benchmark than predicted from the 1985 benchmark and back-casting using the growth of national accounts prices. It follows that the change in real GDP from 1975 onward is correspondingly reduced.

<sup>9</sup>  $RGDP^{NA}$  is similar to the series “rgdpl2” that was used in PWT6.2 and v7 except that: (i) “rgdpl2” used the real growth of absorption from the national accounts of each country rather than the real growth of GDP; (ii) “rgdpl2” was normalized to equal expenditure-side  $CGDP^e$  in the relevant ICP benchmark year, whereas  $RGDP^{NA}$  is normalized to equal the output-side measure  $CGDP^o$  in 2005.

<sup>10</sup> These changes can be large. For example, Jerven (2013) discusses Ghana's upward revision of nominal GDP by 60 percent in 2012. More recently, Nigeria announced an upward revision of almost 100 percent.

prices differ across countries when converted at the nominal exchange rate. The ratio of nominal GDP in local currency to  $CGDP^o$  equals that country's PPP exchange rate relative to the US dollar ( $PL\_GDP^o$ ). The price levels of  $CON$  and  $DA$  in a country are given by  $PL\_CCON$  and  $PL\_DA$ . Price level concepts are discussed in Section V.

To summarize, PWT8 includes a range of measures useful for comparing living standards and productive capacity across countries and over time, including five different measures of real GDP. Many of these measures, with the  $C$ -prefix, are best-suited when comparing levels across countries in the current year. The variables with the  $R$ -prefix are best-suited for comparisons over time, though only  $RGDP^e$  and  $RGDP^o$  are simultaneously suitable for over time and cross-country comparisons. The  $CGDP$  and  $RGDP$  series, on both the expenditure and on the output sides, are tied to *multiple* ICP benchmarks whenever price data for a country have been collected multiple times. If the sole object is to compare the growth performance of economies, we would recommend using the  $RGDP^{NA}$  series (and this is closest to earlier versions of PWT). In the remainder of this paper, we provide a more detailed discussion of the concepts, definitions, and measurement of the PWT variables.

## II. Measurement of Real Expenditure

To illustrate the challenges to constructing “real” GDP, we use a familiar model with traded and nontraded goods. Let  $\mathbf{q}_{Nj}$  be a vector of consumption of nontraded goods in country  $j$ , with prices  $\mathbf{p}_{Nj}$ , and  $\mathbf{q}_{Tj}$  be a vector of consumption of traded goods in country  $j$ , with prices  $\mathbf{p}_{Tj}$ . We suppose that there is a representative consumer in each country with expenditure function denoted by  $E_j(\mathbf{p}_{Nj}, \mathbf{p}_{Tj}, u_j)$ , where  $u_j$  is utility in country  $j$ . Consider a simplified version of this model as discussed in Obstfeld and Rogoff (1996, ch. 4) and Végh (2014, ch. 4 and 6), with a single traded and a single nontraded good. In the monetary version of the model with prices quoted in national currencies (Végh 2014, ch. 6), we might initially assume that the law of one price holds,

$$(1) \quad p_{Tj} = \mathcal{E}_j p_{T0},$$

where  $\mathcal{E}_j$  is the nominal exchange rate in units of country  $j$  currency per unit of country 0 currency. Then this model can readily yield the prediction that the relative price of the nontraded good is higher in a country that is more productive in the traded good sector. The reason, of course, is that increased productivity of the traded good leads to higher wages, which in turn increases the relative price of the nontraded good,  $p_{Nj}/p_{Tj}$ ; this is the celebrated Balassa-Samuelson hypothesis.

The problem that international comparisons seek to solve is how to compare real GDP across countries when their prices differ, as nontraded prices surely do. The “solution” to this problem will depend on what we want real GDP to measure. Throughout this section we maintain that real GDP should measure the standard of living across countries, to be contrasted with real GDP as a measure of productive capacity as outlined in the next section. In order to measure the standard of living—or the cost of obtaining the actual level of utility—it is not enough to just choose



a common numeraire: comparing GDP across countries with a common numeraire will give a misleading idea of how the standard of living differs across countries. To show this, let us choose the single traded good as the numeraire and suppose that (1) holds. Then allowing for a vector of nontraded goods, “real” expenditure in each country is measured as

$$(2) \quad \frac{E_j(\mathbf{p}_{Nj}, p_{Tj}, u_j)}{p_{Tj}} = E_j(\mathbf{p}_{Nj}/p_{Tj}, 1, u_j),$$

where the equality follows because the expenditure function is homogeneous of degree 1 in prices. Compare this to *nominal* expenditure measured in terms of the currency of country 0:

$$(3) \quad \frac{E_j(\mathbf{p}_{Nj}, p_{Tj}, u_j)}{\mathcal{E}_j} = \frac{p_{Tj} E_j(\mathbf{p}_{Nj}/p_{Tj}, 1, u_j)}{\mathcal{E}_j} = p_{T0} E_j(\mathbf{p}_{Nj}/p_{Tj}, 1, u_j),$$

where we again make use of homogeneity of degree 1 of the expenditure function, and (1). It is evident that nominal expenditure in a common currency in (3) differs from “real” expenditure in (2) by just the traded good price,  $p_{T0}$ . So the ratio of (2) across countries will be identical to the ratio of equation (3). But it is well known that expenditure converted at the nominal exchange rate—which is what we are measuring in equation (3)—gives a highly misleading measure of the standard of living. The reason is that in (3) we are still using the high prices of nontraded goods in more productive countries, leading to higher nominal expenditure and also higher “real” expenditure in (2) when measured in terms of the traded goods price. Conversely, the poor countries will look even poorer when their expenditure is converted to the currency of a rich country, as in (3), if we do not also recognize that their nontraded prices are low. To demonstrate this point in our model, choose country 0 as the United States or a European country with high relative nontraded prices, so that  $\mathbf{p}_{Nj}/p_{Tj} < \mathbf{p}_{N0}/p_{T0}$ . Then because the expenditure function is increasing in prices it follows that  $E_j(\mathbf{p}_{Nj}/p_{Tj}, 1, u) < E_j(\mathbf{p}_{N0}/p_{T0}, 1, u)$ , so we obtain

$$(4) \quad \frac{E_j(\mathbf{p}_{Nj}/p_{Tj}, 1, u_j)}{E_0(\mathbf{p}_{N0}/p_{T0}, 1, u_0)} < \frac{E_j(\mathbf{p}_{N0}/p_{T0}, 1, u_j)}{E_0(\mathbf{p}_{N0}/p_{T0}, 1, u_0)} \text{ and} \\ \frac{E_j(\mathbf{p}_{Nj}/p_{Tj}, 1, u_j)}{E_0(\mathbf{p}_{N0}/p_{T0}, 1, u_0)} < \frac{E_j(\mathbf{p}_{Nj}/p_{Tj}, 1, u_j)}{E_0(\mathbf{p}_{Nj}/p_{Tj}, 1, u_0)}.$$

The expressions appearing on the right of the inequality signs in (4) both measure the cost of obtaining the utility levels in each country at *common* relative prices  $\mathbf{p}_{N0}/p_{T0}$  or  $\mathbf{p}_{Nj}/p_{Tj}$ . Regardless of which prices are chosen, the relative standard of living on the right of (4) is *higher* than the ratio of “real” or nominal expenditure from (2) or (3), respectively, that appear on the left of (4). This finding demonstrates that low-income countries (with lower relative prices of nontraded goods) will look poorer if we simply convert their expenditures at the nominal exchange rate. To give just one example from PWT8.1, the GDP of China in 2011 when converted at its

nominal exchange rate is \$5,439 per capita. That is 11.3 percent of nominal GDP per capita in the United States. We will later measure real GDP per capita in China at 20.5 percent of that in the US in 2011, so that converting at the nominal exchange rate understates its value by nearly one-half.<sup>11</sup> Part of this understatement could come from an undervalued exchange rate, so that the law of one price in (1) does not hold for traded goods, but the deeper problem is that the *nontraded* goods are cheaper in China than in the United States when converted at the official exchange rate.

To resolve this problem and obtain an accurate measure of the standard of living or real GDP, one approach would be to collect the price data across countries and estimate expenditure functions as on the right of the inequality signs in (4). The collection of data for comparable goods across countries is undertaken by the International Comparisons Program (ICP)—a joint project of the United Nations, the World Bank, and other international agencies. But these statistical agencies do not like to rely on econometrically estimated expenditure functions to obtain the standard of living, preferring index-number methods that we discuss below. Of course, researchers can estimate expenditure functions and a leading example is Neary (2004), who estimated an AIDS expenditure function across countries to measure the standard of living. Neary pooled data across countries so that there is a single representative consumer with nonhomothetic tastes. Likewise, we shall drop the country subscript from the expenditure function, and now use  $E(\mathbf{p}_{Nj}, \mathbf{p}_{Tj}, u_j)$ . Note that if tastes are homothetic then the expenditure function is written as  $E(\mathbf{p}_{Nj}, \mathbf{p}_{Tj}, u_j) = e(\mathbf{p}_{Nj}, \mathbf{p}_{Tj})u_j$ , in which case the right-hand side of (4) simply becomes the ratio of utilities,  $u_j/u_0$ .

Short of estimating the expenditure function, the approach that is taken by statistical agencies and PWT is to evaluate the expenditures that appear on the right of the inequality signs in (4) using the *observed* consumption vectors in each country. Let  $\mathbf{q}_j = (\mathbf{q}_{Nj}, \mathbf{q}_{Tj})$  be the vector of consumption goods (traded and nontraded) in country  $j$ , with  $\mathbf{p}_j = (\mathbf{p}_{Nj}, \mathbf{p}_{Tj})$  denote the country  $j$  prices. Then we consider evaluating the two ratios

$$(5) \quad \frac{\mathbf{p}'_0 \mathbf{q}_j}{\mathbf{p}'_0 \mathbf{q}_0} \quad \text{and} \quad \frac{\mathbf{p}'_j \mathbf{q}_j}{\mathbf{p}'_j \mathbf{q}_0}.$$

Let us return to the case of a single nontraded good and a single traded good. If country 0 is a rich, productive country then it will have a higher relative price of the nontraded good  $p_{N0}/p_{T0} > p_{Nj}/p_{Tj}$ . With substitution in consumption we would then expect that  $q_{N0}/q_{T0} < q_{Nj}/q_{Tj}$ . Using these inequalities in (5) and dividing both expressions by  $(q_{Tj}/q_{T0})$ , we obtain

$$\frac{\mathbf{p}'_0 \mathbf{q}_j / q_{Tj}}{\mathbf{p}'_0 \mathbf{q}_0 / q_{T0}} = \frac{(p_{N0}/p_{T0})(q_{Nj}/q_{Tj}) + 1}{(p_{N0}/p_{T0})(q_{N0}/q_{T0}) + 1} > \frac{(p_{Nj}/p_{Tj})(q_{Nj}/q_{Tj}) + 1}{(p_{Nj}/p_{Tj})(q_{N0}/q_{T0}) + 1} = \frac{\mathbf{p}'_j \mathbf{q}_j / q_{Tj}}{\mathbf{p}'_j \mathbf{q}_0 / q_{T0}}.$$

<sup>11</sup> The difference between nominal and real GDP per capita is even greater for lower income countries: Cambodia, for example, has nominal (real) GDP per capita that is 1.9 percent (5.9 percent) of the United States in 2011.

The inequality above is obtained because the higher relative price  $p_{N0}/p_{T0} > p_{Nj}/p_{Tj}$  is applied on the left-hand side to relative quantities  $q_{Nj}/q_{Tj} > q_{N0}/q_{T0}$  that are higher in the numerator than in the denominator. In words, this expression says that real consumption in one country relative to another is higher when evaluated at the prices of the *other* country, or to put it most simply, “the grass is greener on the other side.” This result shows that the assessing the standard of living by evaluating the consumption quantities at a particular country’s prices will be quite sensitive to *which* country’s prices are used.

We stress that the above inequality does not depend on having just two goods, and also does not depend on having higher prices of nontraded goods in richer countries, but holds quite generally for any price differences across countries that are consistent with demand-side substitution. Since the country 0 quantity is in the denominator in (5), the first ratio is a Laspeyres quantity index and the second is a Paasche quantity index, and the former exceeds the latter provided that there is negative correlation between the price and quantity differences between countries.<sup>12</sup>

These indexes differ from the ratio of expenditures on the right of (4) because in  $E_j(p_{N0}/p_{T0}, 1, u_j)$ , for example, we use country 0 prices but would allow the consumption quantities in country  $j$  to be *optimal* at those prices; in contrast, in (5) we hold the consumption quantities fixed at their *observed* levels and are not allowing for substitution in response to prices. Under certain conditions, this limitation can be corrected by taking the geometric mean of the Laspeyres and Paasche indexes in (5), obtaining the Fisher ideal quantity index:

$$(6) \quad Q_{j0}^F \equiv \left[ \left( \frac{\mathbf{p}_0' \mathbf{q}_j}{\mathbf{p}_j' \mathbf{q}_0} \right) \left( \frac{\mathbf{p}_j' \mathbf{q}_j}{\mathbf{p}_j' \mathbf{q}_0} \right) \right]^{\frac{1}{2}}.$$

For a bilateral comparison with only two countries, it is known that if the representative consumer’s utility function has a homothetic, quadratic functional form, then the Fisher ideal quantity index in (6) will exactly measure the ratio of utilities  $u_j/u_0$  (Diewert 1976). So in that case, the Fisher ideal quantity index is the “right” way to measure the standard of living across countries. When there are many countries, however, then the comparison is more difficult. Computing (6) for two countries  $j$  compared with  $h$ , and then again for  $h$  compared with  $k$ , and multiplying these, we do not necessarily get the same result as directly comparing real expenditure in  $j$  with  $k$ . To overcome this lack of transitivity, we compare country  $j$  with  $k$  by indirectly comparing them via all other countries  $h = 1, \dots, C$ :

$$(7) \quad Q_{jk}^{GEKS} = \prod_{h=1}^C (Q_{jh}^F Q_{hk}^F)^{\frac{1}{C}}, \text{ with } Q_{hh}^F \equiv 1.$$

<sup>12</sup>More precisely if the price and quantity differences between countries, weighted by values, are negatively correlated, then the Laspeyres index exceeds the Paasche index. See Balk (2008, p. 64).

This so-called GEKS index is transitive by construction and is an accepted method for making multilateral comparisons.<sup>13,14</sup>

We have introduced the reader to these index number comparisons of real expenditure because they play a role in PWT8. Specifically, we shall use a two-stage aggregation procedure that first aggregates the prices of items collected by the ICP *within* the categories of consumption  $C$ , investment  $I$ , and government expenditures  $G$ . Prices within these categories are collected by the ICP in each benchmark year and are aggregated using a GEKS approach, i.e., using Fisher-Ideal price indexes that are made transitive across countries using a formula like (7). Besides the desirable property of transitivity, there is a very practical reason for aggregating the categories of  $C$ ,  $I$ , and  $G$ : in this way, prices *outside* the benchmark years of the ICP can be interpolated or extrapolated using the time-series data on consumption, investment and government price indexes for each country from their national accounts, as described in Section V.

Having thus obtained a complete time-series and cross-country dataset on the prices of  $C$ ,  $I$ , and  $G$  relative to a base country (the US), the second stage is to aggregate to total expenditure. In this second stage we *do not* again use a GEKS procedure to aggregate the prices of  $C$ ,  $I$ , and  $G$  in each year, and in this respect we differ from the World Bank who construct the ICP purchasing-power-parity (PPP) price deflators (or real exchange rates) in this way: real GDP is then obtained as nominal GDP divided by the PPPs. As we shall explain in the next section, such an approach severely limits the ability to compare real GDP both across countries and also *over time*. In order to obtain a time-series and cross-section comparison, we believe that it is essential to adopt another approach to the measurement of real GDP, which will involve using *reference prices*.

In general, the reference-price approach to measuring real expenditure means that a vector  $\pi$  of reference price is used to evaluate real expenditure across countries as

$$\frac{\pi' \mathbf{q}_j}{\pi' \mathbf{q}_0}.$$

In the specific application to PWT8, we are starting with price indexes and hence relative quantities of  $C$ ,  $I$ , and  $G$  obtained from the first-stage GEKS aggregation, so these three components of GDP are multiplied by reference prices and summed in the second stage of aggregation (which is extended to include exports and imports, as discussed below). The question is: what reference prices are used? The most common procedure to use is the *quantity-weighted average over countries of the prices of each good*. This particular choice of reference prices is called the Geary-Khamis (GK) approach.<sup>15</sup> The GK approach satisfies the desirable axiomatic property that

<sup>13</sup> After Gini, Eltetö, Köves, and Szulc. A modern treatment and references are provided by Balk (2008); see also online Appendix B. An alternative approach based on “minimum spanning trees” is presented in Hill (1999). In this method, pairs of countries are compared, either directly or indirectly through a sequence of chained bilateral comparisons involving other countries, with the sequence of countries chosen so that the resulting multilateral indices are least sensitive to the bilateral formula that is used.

<sup>14</sup> Neary (2004) questions whether the GEKS index can accurately reflect the standard of living across countries when preferences are nonhomothetic, however, so this research area is far from resolved. Feenstra, Ma, and Prasada Rao (2009) discuss transitive comparisons with AIDS and nonhomothetic translog expenditure functions.

<sup>15</sup> Due to Geary and Khamis. A modern treatment is provided by Balk (2008) and is described in Section V.

it maintains additivity, so that the components of GDP at reference prices sum to overall real GDP.<sup>16</sup> We now justify the reference-price approach more carefully in the context of measuring real output across countries.

### III. Measurement of Real Output across Countries and over Time

GDP measured from the expenditure side ( $GDP^e$ ) and its components such as consumption and investment play an important role in measures of comparative living standards. We contrast this concept with “real GDP on the output-side,” or real  $GDP^o$ , which is intended to measure the productive capacity of an economy. In order to measure real output we need to hold the entire vector of prices constant across countries and use those prices to evaluate the *production* quantities rather than the consumption quantities. If there were only final goods, one could simply compute production as the difference between consumption and net exports. However, with intermediate goods, the mapping from consumption to production is not straightforward and one approach would be to calculate the value-added components of consumption categories (Herrendorf, Rogerson, and Valentinyi 2013). The data to do so is not widely available. So we take another, indirect approach of specifying the entire production vector for the economy as  $\mathbf{y}_j \equiv (\mathbf{q}_j, \mathbf{x}_j, -\mathbf{m}_j)$ , where  $\mathbf{q}_j$  is the quantity of final goods as before,  $\mathbf{x}_j$  is the quantity of exports and  $-\mathbf{m}_j$  is minus the quantity of imports. Domestic prices for the exports and imports are denoted by  $\mathbf{p}_j^x$  and  $\mathbf{p}_j^m$ , and the vector of prices is  $\mathbf{P}_j = (\mathbf{p}_j, \mathbf{p}_j^x, \mathbf{p}_j^m)$ . We are treating all final goods as nontraded in the sense that some retail services at least have been added, whereas all imports are intermediate inputs into the production process, possibly only into retailing.

To evaluate output we use the revenue or GDP function for the economy,

$$(8) \quad r_j(\mathbf{P}_j, \mathbf{v}_j) = \max_{\mathbf{q}_j, \mathbf{x}_j, \mathbf{m}_j \geq 0} \{ \mathbf{P}_j' \mathbf{y}_j \mid F_j(\mathbf{y}_j, \mathbf{v}_j) = 1 \},$$

where  $F_j(\mathbf{y}_j, \mathbf{v}_j)$  is a transformation function for each country, which depends on the vector  $\mathbf{v}_j$  of primary factor endowments and has an index for country  $j$  due to technological differences across countries. Let us denote a vector of reference prices by  $\mathbf{\Pi} = (\boldsymbol{\pi}, \boldsymbol{\pi}^x, \boldsymbol{\pi}^m)$ . Then real output can be compared across countries using the ratio of revenue functions evaluated at these reference prices:

$$(9) \quad \frac{r_j(\mathbf{\Pi}, \mathbf{v}_j)}{r_0(\mathbf{\Pi}, \mathbf{v}_0)}.$$

One approach to measuring real output would be to estimate the revenue functions in (9). But estimating revenue functions across all countries is even harder than estimating the expenditure function—as Neary (2004) does—because the revenue functions are indexed by country  $j$ , indicating technological differences between

<sup>16</sup>This additivity property does not hold, however, when the GEKS approach alone is used to measure real GDP.

them. For this reason, we must rely on indexes that can be used to approximate the ratio of revenue functions in (9).

As in the previous section, the most obvious choice of prices for evaluating the output vectors of two countries is the prices in either country. We have already discussed the inequality that arises from substitution in demand, with the real consumption of one country versus another being higher when evaluated at the other country's prices. The same inequality holds when evaluating the real output of two countries, despite the fact that this comparison is being made using production data rather than consumption data:

$$(10) \quad \left( \frac{\mathbf{P}'_j \mathbf{y}_j}{\mathbf{P}'_j \mathbf{y}_0} \right) < \left( \frac{\mathbf{P}'_0 \mathbf{y}_j}{\mathbf{P}'_0 \mathbf{y}_0} \right).$$

This inequality can be interpreted by noting that the right-hand side of (10) is the Laspeyres quantity index, which exceeds the Paasche quantity index on the left due to substitution in demand. According to production theory, however, the inequality should be reversed, since those goods whose prices have raised the most will have the greatest quantity increase. Nevertheless, various studies confirm that the “demand-side bias” in (10) holds in empirical work, and this inequality is known as the Gerschenkron effect. Gerschenkron (1951) was the first to provide evidence that the relative GDP of a country was higher when evaluated at another country's prices. Indeed, for the 146 countries in the 2005 ICP comparison, we find that this inequality holds for more than 98 percent of country pairs.

By taking a geometric mean of the Paasche and Laspeyres indexes, we obtain the Fisher quantity index of real output. The question is how this index-number approach will compare to a reference-price approach as in (9). We can establish a rather tight relationship between these two approaches with the following result, proved in online Appendix A:

**THEOREM 1:** *Suppose that the outputs are revenue-maximizing and that the inequality in (10) holds. Then there exists a reference price vector  $\Pi$  between  $\mathbf{P}_j$  and  $\mathbf{P}_k$  such that*

$$\frac{r_j(\Pi, \mathbf{v}_j)}{r_k(\Pi, \mathbf{v}_k)} = \left[ \left( \frac{\mathbf{P}'_j \mathbf{y}_j}{\mathbf{P}'_j \mathbf{y}_k} \right) \left( \frac{\mathbf{P}'_k \mathbf{y}_j}{\mathbf{P}'_k \mathbf{y}_k} \right) \right]^{\frac{1}{2}}.$$

This new result says that computing a Fisher ideal quantity index of production between the countries is a valid comparison of real output between them, in the sense that it is equivalent to using some reference price vector. Remarkably, it does not depend on the functional form of the revenue function but only on optimizing behavior. This theoretical result suggests that there may not be a substantial difference between using the Fisher ideal index of real output—or its generalization, the GEKS approach in (7)—as compared to a reference price approach. We have confirmed that this result holds in PWT8 in a *single* year: whether we are measuring real output or real expenditure, the results from using a GEKS approach do not differ that much from using reference prices constructed as the weighted average of prices across countries.



But this similarity between the index number (GEKS) and reference price (GK) approaches breaks down when we also make comparisons *across time*. In that case we need to recognize that the reference price vector  $\Pi$  established by Theorem 1 is only implicit, and it depends on the level of prices  $\mathbf{P}_j$  and  $\mathbf{P}_k$ . While this enables us to obtain a valid comparison of real output between two countries in each year, we would not be able to compare those real outputs across time because we do not know how the implicit reference price vector is changing over time, and therefore cannot make a “constant price” comparison that we normally expect in “real” variables.

It turns out, however, that we can readily extend Theorem 1 to obtain a consistent comparison of real GDP across countries and simultaneously over time (such variables in PWT8 are indicated by a prefix  $R$ ). Let the subscript  $t$  on all variables indicate time. Suppose that we start in a situation where we have two reference price vectors at two points in time,  $\Pi_\tau = (\pi_\tau, \pi_\tau^x, \pi_\tau^m)$ ,  $\tau = t - 1, t$ , using the reference prices for all final goods plus exports and imports. In order to also compare real output over time, it would be desirable to use a single vector  $\Pi$  and compute the ratios

$$\frac{r_{jt}(\Pi, \mathbf{v}_{jt})}{r_{jt-1}(\Pi, \mathbf{v}_{jt-1})}, j = 1, \dots, C,$$

for each country. Notice that the endowments in this comparison can change over time, as well as the revenue function itself due to technological change, but the reference prices are held constant.

We can apply Theorem 1 by treating the bilateral comparison there as between country  $j$  using reference prices  $\Pi_{t-1}$  and  $\Pi_t$  in the two periods. The optimal outputs at these prices are denoted by  $y_{j\tau}^* \equiv \partial r_{j\tau}(\Pi_\tau, \mathbf{v}_{j\tau}) / \partial \Pi_\tau$ ,  $\tau = t - 1, t$ . We assume that the time-series analogue of (10) holds, which states that for country  $j$

$$(11) \quad \left( \frac{\Pi_t' \mathbf{y}_{jt}^*}{\Pi_t' \mathbf{y}_{jt-1}^*} \right) < \left( \frac{\Pi_{t-1}' \mathbf{y}_{jt}^*}{\Pi_{t-1}' \mathbf{y}_{jt-1}^*} \right).$$

Again, we interpret (11) as stating that the Laspeyres quantity index (on the right) exceeds the Paasche quantity index (on the left). This inequality is another illustration of the Gerschenkron effect.<sup>17</sup> Then an immediate corollary of the earlier theorem is obtained by changing the notation to compare time periods rather than countries, as follows:

**COROLLARY 1:** *Suppose that the outputs are revenue-maximizing and the Gerschenkron effect in (11) holds. Then there exists a reference price vector  $\Pi$  between  $\Pi_{t-1}$  and  $\Pi_t$  such that*

$$(12) \quad \frac{r_{jt}(\Pi, \mathbf{v}_{jt})}{r_{jt-1}(\Pi, \mathbf{v}_{jt-1})} = \left[ \left( \frac{\Pi_t' \mathbf{y}_{jt}^*}{\Pi_t' \mathbf{y}_{jt-1}^*} \right) \left( \frac{\Pi_{t-1}' \mathbf{y}_{jt}^*}{\Pi_{t-1}' \mathbf{y}_{jt-1}^*} \right) \right]^{\frac{1}{2}}.$$

<sup>17</sup>Evidence for US exports and imports comes from Alterman, Diewert, and Feenstra (1999). They find that the Laspeyres price or quantity indexes for imported goods over time exceed the Paasche price or quantity indexes, consistent with demand-side substitution in the United States. The same inequality holds for many exported goods, too, which must reflect foreign demand-side substitution rather than US supply-side substitution.

To understand how this result is applied in PWT8, recall that we start with a set of prices for  $C$ ,  $I$ , and  $G$ , constructed across countries (relative to a base country, the United States) and over time, constructed from the GEKS method described in (7). To these we add relative prices for exports  $X$  and imports  $M$ , as described in Section V. That is the first stage of aggregation. In the second stage, we use the GK method to construct reference price for each of  $C$ ,  $I$ ,  $G$ ,  $X$ , and  $M$  as the weighted average of these prices (relative to the US) across countries: those are the reference prices  $\Pi_t$  in each year. Then the right-hand side of formula (12) can be used to obtain a *constant reference-price growth rate* of real output. In practice, instead of using the optimal quantities as on the right of (12) we instead use observed quantities (see Section V). In this way, we obtain data for real GDP across countries that are consistent with the reference prices established for each year and also correct for *changing* reference prices when making comparisons across time. These variables are denoted in PWT8 by  $RGDP^e$  (using only prices for  $C$ ,  $I$ , and  $G$ ) and  $RGDP^o$  (also using prices for  $X$  and  $M$ ). We believe that they offer the best cross-country and time-series comparisons of real GDP. As we mentioned at the end of Section I, however, for research questions that can be answered with the growth rate of real GDP from the national accounts, that growth rate is used to construct  $RGDP^{NA}$  and this variable is the closest to real GDP as reported in past versions of PWT.<sup>18</sup>

#### IV. Total Factor Productivity

Having obtained the comparison of real GDP across countries and over time, we now show how total factor productivity can be computed. We rely heavily on our earlier results and on Caves, Christensen, and Diewert (1982a,b)—henceforth, CCD—and Diewert and Morrison (1986)—henceforth, DM. We drop the time subscript and return to the ratio of revenue functions given in (9),  $r_j(\Pi, \mathbf{v}_j)/r_k(\Pi, \mathbf{v}_k)$ , which measures real output in country  $j$  relative to  $k$ . Real output can vary due to differing factor endowments, as indicated by  $v_{lj}$  and  $v_{lk}$  for factors  $l = 1, \dots, L$ , or due to differing technologies, as indicated by the country subscript  $j$  and  $k$  on the revenue function. We can isolate the effect of productivity differences by considering two alternative ratios

$$A_j \equiv \frac{r_j(\Pi, \mathbf{v}_j)}{r_k(\Pi, \mathbf{v}_j)}, \quad \text{and} \quad A_k \equiv \frac{r_j(\Pi, \mathbf{v}_k)}{r_k(\Pi, \mathbf{v}_k)}.$$

Both of these ratios measure the overall productivity of country  $j$  to country  $k$ , holding fixed the level of factor endowments. Neither ratio can be measured directly from the data, however, because the numerator or the denominator involves a revenue function that is evaluated with the productivity of one country but the endowments of the other. But the results of CCD and DM tell us that if the revenue function has a translog functional form, then we can precisely measure the geometric mean of these two ratios:

<sup>18</sup>See footnotes 7 and 9.

**THEOREM 2:** Assume that the revenue functions  $r_j(\Pi, \mathbf{v}_j)$  and  $r_k(\Pi, \mathbf{v}_k)$  are both translog functions that are homogeneous of degree 1 in  $\mathbf{v}$  and have the same second-order parameters on factor endowments, but may have different parameters on prices and on interaction terms due to technological differences between countries. Then the overall productivity of country  $j$  relative to  $k$  can be measured by

$$(13) \quad (A_j A_k)^{\frac{1}{2}} = \frac{r_j(\Pi, \mathbf{v}_j)}{r_k(\Pi, \mathbf{v}_k)} / Q_T(\mathbf{v}_j, \mathbf{v}_k, \mathbf{w}_j^*, \mathbf{w}_k^*),$$

where  $Q_T(\mathbf{v}_j, \mathbf{v}_k, \mathbf{w}_j^*, \mathbf{w}_k^*)$  is the Törnqvist quantity index of factor endowments, defined by

$$(14) \quad \ln Q_T(\mathbf{v}_j, \mathbf{v}_k, \mathbf{w}_j^*, \mathbf{w}_k^*) = \sum_{l=1}^L \frac{1}{2} \left( \frac{w_{lj}^* v_{lj}}{\sum_m w_{mj}^* v_{mj}} + \frac{w_{lk}^* v_{lk}}{\sum_m w_{mk}^* v_{mk}} \right) \ln \left( \frac{v_{lj}}{v_{lk}} \right),$$

and where  $w_{lj}^* = \partial r_j(\Pi, \mathbf{v}_j) / \partial v_{lj}$ ,  $w_{lk}^* = \partial r_k(\Pi, \mathbf{v}_k) / \partial v_{lk}$  are the factor prices using reference prices  $\Pi$ .

CCD establish a result like Theorem 2 using the translog distance and transformation functions, whereas DM establish an analogous result using a time-series rather than cross-country comparison. For completeness, we include a proof in online Appendix A, where we explain that the restriction that the second-order parameters of the factor endowments restricts the technology differences across countries to be of the Harrod-neutral type on factors, or to apply to sectors. The GDP ratio  $r_j(\Pi, \mathbf{v}_j) / r_k(\Pi, \mathbf{v}_k)$  in (13) is measured as in Theorem 1, while the Törnqvist quantity index is measured as in (14) but using *observed* factor prices (and therefore observed factor shares) rather than factor prices evaluated at the reference prices, as discussed in the next section.

Theorem 2 tells us that by dividing the observed difference in real  $GDP^o$  by the Törnqvist quantity index of factor endowments, we obtain a meaningful measure of the productivity difference between the countries. This result, like the GDP function in (8) and Theorem 1, relies on strict neoclassical assumptions and in particular on perfect competition in product and factor markets. Then with the added assumptions on the translog function described in Theorem 2, the productivity measure in (13)–(14) reflects cross-country differences in aggregate technology.

We recognize that the requirement of perfect competition in product and factor markets, needed for Theorems 1 and 2, is strong. Recent literature has incorporated imperfect competition into the measurement of productivity: e.g., de Loecker (2009) for a single firm or industry, and Basu et al. (2014) for the entire economy. While we expect that our results could be extended to incorporate imperfect competition, such an extension is beyond the scope of the present paper. Burstein and Cravino (2015) relate empirical productivity measures (using procedures of statistical agencies that are similar to ours) to aggregate productivity and welfare changes in international trade models featuring monopolistic competition, and find that those empirical productivity measures are well-grounded. Likewise, Basu et al. (2014) argue that even with imperfect competition in product markets, TFP calculations based

on aggregate consumption (rather than output) still provide valid welfare comparisons across countries. Specifically, they show that welfare can be measured through the present value of future relative TFP and the relative current capital stock (per capita). Most important, this result does not rely on assumptions regarding market structure and technology, but follows only from assuming a price-taking, optimizing representative consumer. Furthermore, they show that in an open economy, this welfare-relevant measure of TFP should be computed based on real domestic absorption.<sup>19</sup> For these various reasons, we expect that the methods used to construct PWT8, as outlined in the next section, while derived from perfectly competitive behavior as in Theorems 1 and 2, may well apply more generally.

## V. Implementation in PWT

Measures of real GDP in PWT8 are built up from detailed price data on consumption,  $C$  and  $G$ ; investment,  $I$ ; exports and imports,  $X$  and  $M$ ; as well as nominal expenditures and trade. This is done in a two-step aggregation procedure: using the GEKS price indexes (7) to compute aggregates *within* the major categories of GDP; and then using reference prices *for each* of these major categories computed as the world average prices with the Geary-Khamis (GK) approach. We first outline the measurement of GDP from the expenditure side, then from the output side, and finally discuss productivity.

Within each category  $C$ ,  $I$ , and  $G$ , we first aggregate the ICP prices using GEKS price indexes.<sup>20</sup> ICP prices are available for the benchmark years 1970, 1975, 1980, 1985, 1996, and 2005. There is an expanded set of countries available from the ICP in each benchmark, and in total 167 countries are used in one benchmark or another. That is the set of countries included in PWT8 (this set will expand as more countries are included in future benchmarks).<sup>21</sup> For each country, we keep track of which benchmarks were used; years in-between benchmarks will have the prices for final goods *interpolated* using the corresponding price trends from countries' national accounts data; and for years before the first or after the last benchmark for each country the prices of final goods are *extrapolated* using national account data (see online Appendix B).

In a second step the GEKS price indexes are used to obtain a  $(3 \times 1)$  vector of reference prices for  $C$ ,  $I$ ,  $G$  (and later, exports and imports).<sup>22</sup> The quantity of domestic final goods  $C$ ,  $I$ , and  $G$  are included within the  $(3 \times 1)$  vector  $\mathbf{q}_j$ .<sup>23</sup> Given the  $(3 \times 1)$  vector of reference prices for domestic final goods,  $\boldsymbol{\pi}$ , the PPP exchange rate can be defined as

$$(15) \quad PPP_j^q = \mathbf{p}_j' \mathbf{q}_j / \boldsymbol{\pi}_j' \mathbf{q}_j.$$

<sup>19</sup> As discussed in Section I and in the next section, PWT8.1 includes the TFP measure  $CWTP$  that is based on domestic absorption rather than output.

<sup>20</sup> Since output prices for government consumption,  $G$ , are typically unobservable, ICP provides information on relative input prices, notably relative wages. For PWT, we modify the ICP numbers by implementing a common productivity adjustment approach described in Chapter 4 of World Bank (2014); see also Heston (2013). This leads to results that are more comparable between countries and to what is implemented in ICP 2011.

<sup>21</sup> The new PWT9 will be based on the 2011 ICP and cover nearly 180 countries.

<sup>22</sup> Below, we outline how these reference prices are estimated from the GK procedure; see also online Appendix B.

<sup>23</sup> The relative quantity of these variables is obtained by dividing their relative value by the GEKS price index.

This equation shows that the PPP exchange rate is just the ratio of expenditure at local prices to that at reference prices measured in the currency of the base country, in our case the US. Because the PPP is in units of the currency of country  $j$  per unit of the currency of the base country, it is common to divide it by the nominal exchange rate to obtain what is called the “price level” of country  $j$ :

$$PL_j \equiv \frac{PPP_j}{\mathcal{E}_j}.$$

The ratio of price levels is typically known as the *real exchange rate* between countries. These price levels are given in PWT for each country relative to the United States. Denoting nominal GDP in national currency by  $GDP_j$ , and the trade balance by  $(X_j - M_j)$ , *real GDP on the expenditure side* is then computed as

$$(16) \quad CGDP_j^e \equiv \pi' \mathbf{q}_j + (X_j - M_j)/PPP_j^q = GDP_j/PPP_j^q.$$

The expression  $\pi' \mathbf{q}_j$  on the left is just real expenditure on final goods, which is obtained by deflating nominal expenditure  $\mathbf{p}'_j \mathbf{q}_j$  by the PPP exchange rate in equation (15). In the second term, we *also* deflate the trade balance by the same PPP exchange rate that is constructed over final goods. From the point of view of the representative consumer, we are essentially treating the trade balance as an income transfer that is then deflated by the local prices, including prices for nontraded goods. By this logic, one can view (16) as a measure of the standard of living for country  $j$ , but now extended to incorporate the trade balance.

In addition to  $CGDP^e$ , PWT8 also includes a measure of real consumption and a measure of real domestic absorption. The measure of real domestic absorption is equal to  $CGDP^e$  except for the trade balance, so  $CDA_j = \pi' \mathbf{q}_j$ . Real consumption includes both private ( $C$ ) and public consumption ( $G$ ), but in contrast to real domestic absorption excludes investment, so  $CCON_j = \pi_C q_{Cj} + \pi_G q_{Gj}$ . In PWT8, we provide these real consumption and real  $GDP^e$  variables and also, for the first time, we provide estimates of real GDP on the output side ( $GDP^o$ ) for the full set of PWT countries and all years. This requires relative price data for imports and exports, as discussed in Feenstra et al. (2009). Compared with their experimental estimates, the real  $GDP^o$  results in PWT8 are much more reliable due to the use of new relative prices of exports and imports that correct for quality, as constructed by Feenstra and Romalis (2014). This quality correction is crucial as the prices of traded goods are computed as unit values of export and imports products, rather than the precisely specified prices collected for consumption and investment goods in the ICP.

To correct the unit values for quality, recent literature such as Khandelwal (2010) and Hallak and Schott (2011) presume that a good that is imported in high quantity but without having a low price must be of high quality. One shortcoming of this approach is that a good might be imported in high quantity because there are many varieties of it (e.g., many models of cars from Japan).<sup>24</sup> So Feenstra and Romalis

<sup>24</sup> We have also computed the quality-adjusted export prices using the technique of Khandelwal (2010), who uses country population as a proxy for export variety. As shown in Feenstra and Romalis (2014, Figure XIII), there

(2014) refine this demand-side measurement by adding a supply side with monopolistically competitive firms. Using the assumption of free entry they solve for the variety of each good produced, so that differences in the range of varieties sold from each exporter to each importing country are accounted for. Dividing the unit-values of exports and imports by the quality estimates, quality-adjusted prices are obtained. This procedure is implemented at the level of four-digit Standard International Trade categories between each pair of countries, and then aggregated to 6 one-digit Broad Economic categories, such as consumer goods or fuel. The quality-adjusted price indexes in these broad categories show much less variation across countries than do the raw unit-values, since most of the variation in the unit values is due to quality.

The quality-adjusted trade prices are an important ingredient for real GDP<sup>o</sup>. They are averaged across countries to obtain reference prices for exports and imports. These are included within  $\Pi = (\pi, \pi^x, \pi^m)$  and applied to the revenue function<sup>25</sup> to measure real GDP on the output side as

$$(17) \quad CGDP_j^o \equiv \pi' \mathbf{q}_j + \pi'^x \mathbf{x}_j - \pi'^m \mathbf{m}_j = \frac{C_j + I_j + G_j}{PPP_j^q} + \frac{X_j}{PPP_j^x} - \frac{M_j}{PPP_j^m} \\ = \frac{GDP_j}{PPP_j^o},$$

where the equalities follow by defining the PPPs of final goods, exports, imports, and GDP as

$$(18) \quad PPP_j^q \equiv \frac{\mathbf{p}'_j \mathbf{q}_j}{\pi' \mathbf{q}_j}, \quad PPP_j^x \equiv \frac{\mathbf{p}'_j^x \mathbf{x}_j}{\pi'^x \mathbf{x}_j}, \quad PPP_j^m \equiv \frac{\mathbf{p}'_j^m \mathbf{m}_j}{\pi'^m \mathbf{m}_j}, \\ PPP_j^o \equiv \frac{\mathbf{p}'_j \mathbf{q}_j + \mathbf{p}'_j^x \mathbf{x}_j - \mathbf{p}'_j^m \mathbf{m}_j}{\pi' \mathbf{q}_j + \pi'^x \mathbf{x}_j - \pi'^m \mathbf{m}_j}.$$

It is apparent that nominal exports and imports in (17) are not deflated by a PPP computed over final goods, as in (16), but are deflated by PPPs that are specific to exports and imports. The use of reference prices for all goods, including exports and imports as in (17), makes real GDP<sup>o</sup> an appropriate measure of the productive

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is then a strong negative correlation between export quality and population, and so a strong positive correlation between the quality-adjusted terms of trade and population. As a result, the Khandelwal procedure leads to countries with large populations, such as India, having  $CGDP^e$  noticeably higher than  $CGDP^o$ . We believe that this tendency is artificial (i.e., India does not have such a strong terms of trade) and it does not occur using our own methods.

<sup>25</sup>The revenue function presumes perfect competition, whereas the quality-adjusted export and import prices have been obtained from a model of monopolistic competition. This does not create any inconsistency for import prices, because the quality-adjusted demands are still a standard function of the quality-adjusted prices. But on the export side, monopolistically competitive firms are charging a fixed CES markup over marginal costs, contrary to the standard revenue function. Still, Feenstra and Kee (2008) show that in the monopolistic competition model with CES preferences, a well-specified GDP function is being maximized. Further, Burstein and Cravino (2015) allow for monopolistic competition in an international trade model, and find that conventional measures of GDP construction are still adequate to a first order. For these reasons and because there is no practical alternative, we are willing to use the quality-adjusted export prices even with the perfectly competitive revenue function.



capacity of countries. If we divide the PPPs in (18) by the nominal exchange rate, then we obtain the *price levels* of these components of GDP.

The reference prices used in computing real GDP<sup>o</sup> and GDP<sup>e</sup> have not been defined up to this point; in PWT8 we compute these based on the Geary-Khamis (GK) approach. The first equation is the definition of the PPP for GDP<sup>o</sup>,  $PPP_j^o$ , in (18). Given this PPP, the reference price for each product is computed as the (quantity-weighted) average of the country prices relative to their PPP:

$$(19) \quad \pi_i = \frac{\sum_{j=1}^C (p_{ij} / PPP_j^o) q_{ij}}{\sum_{j=1}^C q_{ij}}, \quad \pi_i^x = \frac{\sum_{j=1}^C (p_{ij}^x / PPP_j^o) x_{ij}}{\sum_{j=1}^C x_{ij}},$$

$$\pi_i^m = \frac{\sum_{j=1}^C (p_{ij}^m / PPP_j^o) m_{ij}}{\sum_{j=1}^C m_{ij}},$$

where the index  $i$  in the reference prices for final goods,  $\pi_i$ , runs over  $C, I, G$ , and in the reference prices for exports and imports,  $\pi_i^x$  and  $\pi_i^m$ , runs over the one-digit Broad Economic categories. Then  $PPP_j^o$  in (18) together with (19) are a system of equations that can be solved up to a normalization.

Real GDP on the expenditure side and output side will differ due to the terms of trade faced by countries. This is apparent by taking the difference between (16) and (17):

$$CGDP_j^e - CGDP_j^o = \left( \frac{PPP_j^x}{PPP_j^q} - 1 \right) \frac{X_j}{PPP_j^x} - \left( \frac{PPP_j^m}{PPP_j^q} - 1 \right) \frac{M_j}{PPP_j^m}.$$

To simplify this expression, we can divide by  $CGDP_j^o$  and rearrange terms to obtain

$$(20) \quad \underbrace{\frac{CGDP_j^e - CGDP_j^o}{CGDP_j^o}}_{\text{Gap}} = \underbrace{\frac{1}{2} \left( \frac{PPP_j^x}{PPP_j^q} - \frac{PPP_j^m}{PPP_j^q} \right)}_{\text{Terms of trade}} \underbrace{\left( \frac{X_j / PPP_j^x}{CGDP_j^o} + \frac{M_j / PPP_j^m}{CGDP_j^o} \right)}_{\text{Real openness}}$$

$$+ \underbrace{\left[ \frac{1}{2} \left( \frac{PPP_j^x + PPP_j^m}{PPP_j^q} \right) - 1 \right]}_{\text{Traded/nontraded price}} \underbrace{\left( \frac{X_j / PPP_j^x}{CGDP_j^o} - \frac{M_j / PPP_j^m}{CGDP_j^o} \right)}_{\text{Real balance of trade share}}.$$

We see that the gap between real GDP<sup>e</sup> and real GDP<sup>o</sup> can be expressed as the sum of two terms: the first is the terms of trade (expressed as a difference rather than a ratio) times real openness; and the second is the relative prices of traded goods (again expressed as a difference) times the real balance of trade. The influence of both these terms on the gap between real GDP from the expenditure and output sides has also been shown by Kohli (2004, 2006) and Reinsdorf (2010), and we will illustrate this relation with some examples from PWT8.1 in Section VI.

The above formulas are computed for each year, obtaining the measures of real GDP that are based on current-year reference prices, i.e.,  $CGDP_j^e$  and  $CGDP_j^o$ . To correct for changing reference prices over time, we use Corollary 1 to define the growth rate of real GDP<sup>o</sup> as

$$(21) \quad \frac{RGDP_{jt}^o}{RGDP_{jt-1}^o} \equiv \left[ \left( \frac{\Pi'_{t-1} \mathbf{y}_{jt}}{\Pi'_{t-1} \mathbf{y}_{jt-1}} \right) \left( \frac{\Pi'_t \mathbf{y}_{jt}}{\Pi'_t \mathbf{y}_{jt-1}} \right) \right]^{\frac{1}{2}}$$

$$= \left[ \left( \frac{\pi'_{t-1} \mathbf{q}_{jt} + \pi'^x_{t-1} \mathbf{x}_{jt} - \pi'^m_{t-1} \mathbf{m}_{jt}}{\pi'_{t-1} \mathbf{q}_{jt-1} + \pi'^x_{t-1} \mathbf{x}_{jt-1} - \pi'^m_{t-1} \mathbf{m}_{jt-1}} \right) \left( \frac{\pi'_t \mathbf{q}_{jt} + \pi'^x_t \mathbf{x}_{jt} - \pi'^m_t \mathbf{m}_{jt}}{\pi'_t \mathbf{q}_{jt-1} + \pi'^x_t \mathbf{x}_{jt-1} - \pi'^m_t \mathbf{m}_{jt-1}} \right) \right]^{\frac{1}{2}}.$$

Thus, the quantities of final goods, exports, and imports change from  $t - 1$  to  $t$  in both ratios, and are evaluated using the reference prices from one period or the other, and then taking the geometric mean. PWT8 uses the growth rates from this formula to compute real GDP<sup>o</sup> in all years other than the 2005 benchmark, for which  $RGDP^o = CGDP^o$ .

In addition, the constant-price growth rates of real  $GDP^e$  are obtained by using only the reference prices  $\pi'_{t-1}$  and  $\pi'_t$  of the final consumption goods.  $RGDP^e = CGDP^e$  is defined by (16) in the benchmark year 2005, and its growth rate to other years is obtained as

$$(22) \quad \frac{RGDP_{jt}^e}{RGDP_{jt-1}^e}$$

$$\equiv \left[ \left( \frac{\pi'_{t-1} \mathbf{q}_{jt} + (X_{jt} - M_{jt})/PPP_{jt}^q}{\pi'_{t-1} \mathbf{q}_{jt-1} + (X_{jt-1} - M_{jt-1})/PPP_{jt-1}^q} \right) \left( \frac{\pi'_t \mathbf{q}_{jt} + (X_{jt} - M_{jt})/PPP_{jt}^q}{\pi'_t \mathbf{q}_{jt-1} + (X_{jt-1} - M_{jt-1})/PPP_{jt-1}^q} \right) \right]^{\frac{1}{2}}.$$

Notice that in (22) we deflate nominal exports and imports by the PPPs for final goods,  $PPP_{jt}^q$  and  $PPP_{jt-1}^q$ , computed from the reference prices for those goods. This is in contrast to (21) where the actual reference prices of exports and imports are used.

Theorem 2 tells us that by deflating the observed difference in real GDP<sup>o</sup> by the Törnqvist quantity index of factor endowments, we obtain a meaningful measure of the productivity difference between the countries. The Törnqvist quantity index is constructed using the factor prices that are implied by the reference prices for goods,  $\Pi$ . In practice we do not observe these factor prices, and so we replace the theoretical expressions in (13)–(14) with versions that we can measure from the data:

$$(23) \quad CTFP_{jk} \equiv \frac{CGDP_j^o}{CGDP_k^o} / Q_T(\mathbf{v}_j, \mathbf{v}_k, \mathbf{w}_j, \mathbf{w}_k),$$

where we use  $CTFP_{jk}$  to denote the (current-year price) productivity of country  $j$  relative to  $k$ , and the Törnqvist quantity index of factor endowments  $Q_T$  is evaluated

with observed factor prices and shares. PWT8 includes  $CTFP_{jk}$  computed with current year prices for each country  $j$  relative to the United States. In addition to the production-side measure of  $CTFP_{jk}$ , PWT8 also includes a welfare-relevant measure of TFP based on the work of Basu et al. (2014). This measure is based not on relative  $CGDP^o$  levels, but instead on relative domestic absorption, CDA:

$$(24) \quad CWTFP_{jk} \equiv \frac{CDA_j}{CDA_k} / Q_T(\mathbf{v}_j, \mathbf{v}_k, \mathbf{w}_j, \mathbf{w}_k).$$

An analogous expression is used for *productivity growth* in each country, which is defined by reintroducing time subscripts and using real GDP and factor input growth rates obtained from national accounts data:

$$(25) \quad RTFP_{jt,t-1}^{NA} \equiv \frac{RGDP_{jt}^{NA}}{RGDP_{jt-1}^{NA}} / Q_T(\mathbf{v}_{jt}, \mathbf{v}_{jt-1}, \mathbf{w}_{jt}, \mathbf{w}_{jt-1}).$$

For this purpose, we have developed new data on factor inputs—capital and labor—and factor income shares.<sup>26</sup> Specifically, PWT8 (re)introduces a measure of the physical capital stock, based on long time-series of investment by asset. For each country, we distinguish investment in structures, transport equipment, and machinery, and for a range of countries, we also separately distinguish investment in computers, communication equipment, and software. Investments are cumulated into capital stocks using asset-specific geometric depreciation rates using the perpetual inventory method. The relative factor price of the capital stock is computed by aggregating asset-specific investment prices using shares of each asset in the total (current cost) capital stock. PWT has long included data on the number of workers in an economy, but a more accurate measure of relative labor input should account for the large differences in schooling across countries. To that end, PWT8 includes an index of human capital per worker based on the average years of schooling, linearly interpolated from Barro and Lee (2013), and an assumed rate of return for primary, secondary, and tertiary education, as in Caselli (2005).<sup>27</sup>

We have also developed new information about the share of labor income in GDP. An important measurement challenge, well known since Gollin (2002), is that self-employed workers earn income for both the labor and capital they supply. We follow Gollin (2002) in splitting this mixed income between capital and labor income using the same shares as found for nonmixed income. Where mixed income is not available as a separate data item in a country's national accounts, we impute the labor income of the self-employed either by assuming that self-employed earn the same average income as employees or based on the share of agriculture in value added. In online Appendix C, we go into greater detail on these measurement choices and their implications. One important result, though, is that the global decline in the corporate labor income share that was documented by Karabarbounis and Neiman (2014) is also found for our economy-wide labor shares. In computing

<sup>26</sup> See online Appendix C for more details on the data sources and measurement methodology.

<sup>27</sup> Though we note that this is an imperfect measure of human capital as differences in the returns to experience (Lagakos et al. 2014) and the quality of schooling (Hanushek and Woessman 2012) are not accounted for.

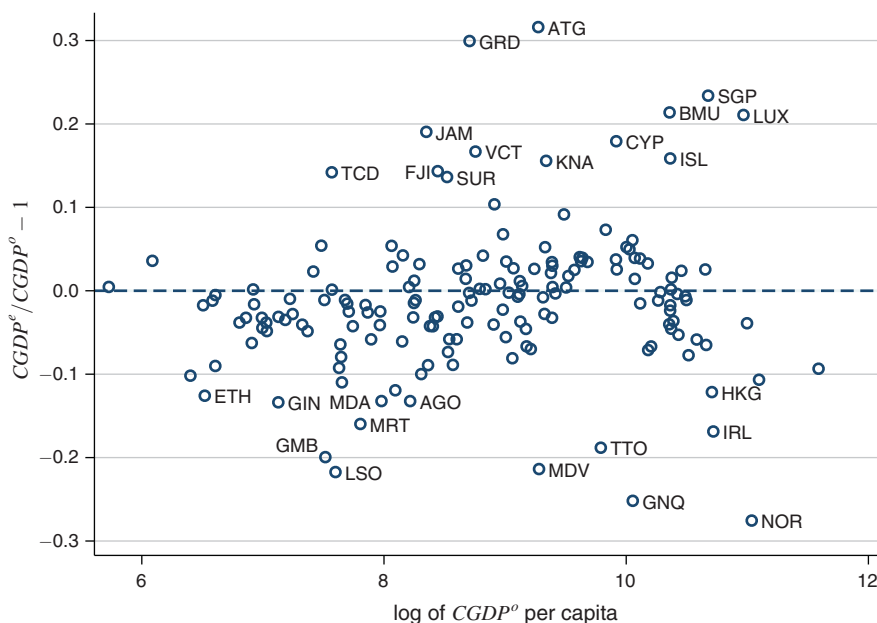


FIGURE 1. REAL GDP PER CAPITA IN 2005 AND THE GAP BETWEEN  $CGDP^e$  AND  $CGDP^o$

Notes: Includes 166 of the countries in PWT. Excluded is El Salvador with a gap of 1.5.

Source: Computations based on PWT8.1.

the overall quantity index of factor endowments, we assume that the income share of physical capital equals 1 minus the labor income share, though future work on distinguishing natural from physical capital, as done for one year in Caselli and Feyrer (2007), would be an important improvement.

## VI. Applications

Based on the next generation of PWT, version 8.1, we provide three applications to illustrate its usefulness: an analysis of the difference between real GDP from the expenditure and output sides; an analysis of the Balassa-Samuelson effect; and a decomposition of the variance of real GDP per capita into the variance of factor inputs and productivity (known as development accounting).

### A. $GDP^e$ versus $GDP^o$

Figure 1 illustrates how real  $GDP^o$  differs from real  $GDP^e$  in 2005. For some countries the differences are clearly notable, with several absolute differences near 30 percent. At the same time, many differences are not so large: 153 of the 166 countries have a  $GDP^e$  level within 10 percent of their  $GDP^o$  level. Note also that the gap between  $CGDP^e$  and  $CGDP^o$  does not vary systematically with the level of  $CGDP^o$  per capita. To better understand what is driving these gaps, we use the decomposition introduced in equation (20). According to this, consumption possibilities can exceed productive capacity when a country faces favorable terms of

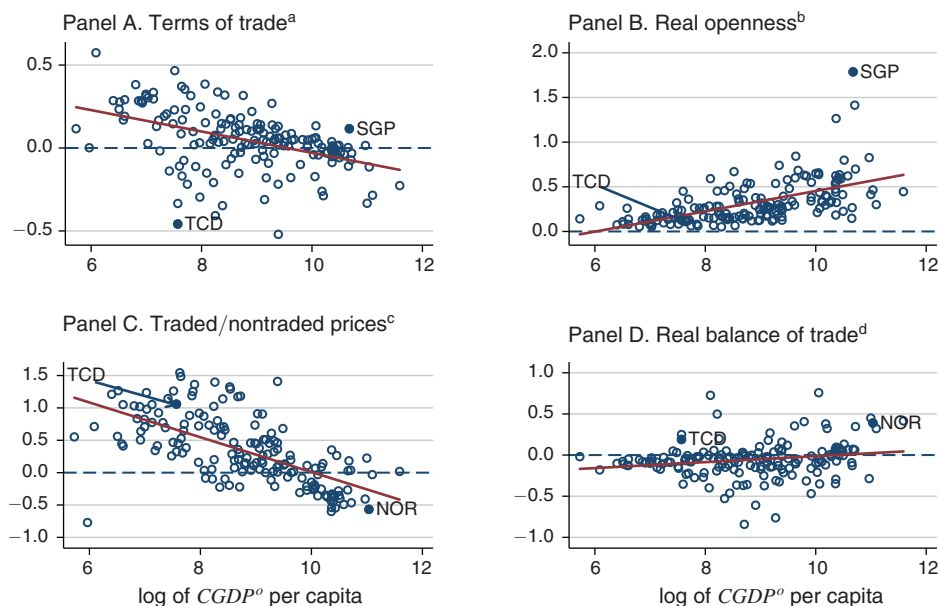


FIGURE 2. DECOMPOSING THE GAP BETWEEN  $CGDP^e$  AND  $CGDP^o$  IN 2005

Notes: See equation (19) for the definition of the concepts plotted in the four panels.

<sup>a</sup>Omitted is Zimbabwe (1.0)

<sup>b</sup>Omitted is El Salvador (4.2)

<sup>c</sup>Omitted are Tajikistan (2.4), Uzbekistan (3.9), and Zimbabwe (3.0)

<sup>d</sup>Omitted is El Salvador (−2.2)

Source: Computations based on PWT8.1.

trade and the gains are larger whenever real openness is larger. In contrast, a country only gains excess consumption possibilities from a positive real balance of trade when traded goods are expensive compared to nontraded goods. Following the basic argument from Section II this will mostly be the case in poorer countries while in rich countries, traded goods are relatively cheap. Figure 2 illustrates the decomposition of the gaps from Figure 1 in 2005, according to equation (19).

Panel A of Figure 2 shows that terms of trade are negatively related to  $CGDP^o$  per capita, which follows from the results of Feenstra and Romalis (2014).<sup>28</sup> There is a positive relationship between real openness and income levels as shown in panel B; a finding that is consistent with Alcalá and Ciccone (2004). Panel C shows how the ratio of traded to nontraded prices declines with income, consistent with the Balassa-Samuelson effect, while the real balance of trade in panel D shows a positive relationship with income, reflective of the Lucas (1990) paradox where capital flows from poor to richer countries. The overall gap between  $CGDP^e$  and  $CGDP^o$  is not systematically related with income levels, however, because the various positive and negative relationships with income levels cancel out when combined.

For illustration purposes, we have highlighted the observations for Chad (TCD), Singapore (SGP, panels A and B), and Norway (NOR, panels C and D). Figure 1

<sup>28</sup>Feenstra and Romalis (2014) find that quality-adjusted import prices are lower for poor countries, leading to the negative relationship between the terms of trade and country income. This relationship is weak before the mid-1990s, while there is a consistently significant negative relationship since 1996.

shows considerable positive gaps between  $CGDP^e$  and  $CGDP^o$  for both Singapore (+23 percent) and Chad (+13 percent), while the gap in Norway is strongly negative (−28 percent). The reason for Singapore's large gap is a small but positive terms of trade combined with the largest observed real openness—its real balance of trade and traded/nontraded price ratio contribute little. In contrast, Chad had very negative terms of trade but combined with low real openness, the negative contribution to the overall gap is limited. Because of a high traded/nontraded price ratio and a positive real balance of trade, Chad's overall gap ends up strongly positive. Norway, finally, also has a positive real balance of trade but because nontraded prices are relatively high in 2005, the overall result is a negative gap between  $CGDP^e$  and  $CGDP^o$ .

While the above discussion has highlighted some countries with large differences between  $CGDP^e$  and  $CGDP^o$ , for many important countries the difference is quite small. China, for example, has  $CGDP^e$  ( $CGDP^o$ ) per capita that is 13.7 percent (13.8 percent) of that in the United States in 2005 and 20.4 percent (20.5 percent) in 2011. The similar values for the expenditure- and output-side measures of real GDP follow from variables in (20) that are relatively small and offsetting in sign: China's terms of trade is slightly negative, but its ratio of traded to nontraded prices is greater than unity with a positive but modest real balance of trade.<sup>29</sup>

### B. The Balassa-Samuelson Effect in PWT8.1

In panel C of Figure 2 we illustrated the Balassa-Samuelson or Penn effect for 2005: the observation that the relative price of nontraded goods to traded goods increases with the income level of a country. Surprisingly, Bergin, Glick, and Taylor (2006) found that there was no evidence of a Penn effect in the early 1950s, and that the effect gradually became significant and strengthened over time. Their analysis was based on PWT version 6 and we revisit it using version 8. Consider the regression

$$(26) \quad \ln\left(\frac{PPP_{it}^o}{\mathcal{E}_{it}}\right) = \beta_0 + \beta_1 \ln\left(\frac{CGDP_{it}^o}{POP_{it}}\right) + \varepsilon_{it},$$

where  $\mathcal{E}_{it}$  is the exchange rate and  $POP$  is the population of country  $i$  at time  $t$ .<sup>30</sup> The dependent variable in (26) is the price level of each country relative to the United States.

The finding of Bergin, Glick, and Taylor (2006) is puzzling, as the Balassa-Samuelson effect was already identified in data for the 1950s and 1960s

<sup>29</sup> We note that the 2005 prices for final consumption goods for China used in PWT8 have been adjusted downward by 20 percent as compared to the ICP values, which is the same adjustment that was made in PWT7 and reflects the fact that the ICP prices were collected in large part from urban areas in China. This correction is discussed further in Feenstra et al. (2013). Further adjustments for biases in ICP 2005 are also made in PWT8.1, based on Inklaar and Rao (2014) and described in Feenstra, Inklaar, and Timmer (2015b).

<sup>30</sup> Bergin, Glick, and Taylor (2006) divide the country's GDP per capita level by the US level in every year, but this only affects the estimate of  $\beta_0$ . Also note that sometimes the exchange-rate-converted GDP per capita level is used as the explanatory variable instead of the PPP-converted GDP per capita level. We follow the approach of Bergin, Glick, and Taylor (2006), which was also advocated by Officer (1982). Officer argued that a productivity measure would be preferable to a GDP per capita level. Results using  $CGDP^o$  per capita or  $CTFP$  are very similar.



in, e.g., Balassa (1964), therefore raising the question why the effect shows up so much later in PWT8. One possibility could be that this effect is an emergent property and Bergin, Glick, and Taylor (2006) propose a model that yields this outcome. An alternative possibility is that the estimation of the PPPs used in the regression (26) in early years is problematic. As explained in Section V, PWT8 includes two types of observations: those based directly on ICP benchmark price survey results or interpolated between benchmarks; and those based on extrapolations from the oldest or most recent benchmarks using relative inflation rates from countries' national accounts data. The benchmark observations (and in effect the interpolated observations) make no assumptions regarding the evolutions of PPPs over time; they are simply based on the observed benchmark survey.

In contrast, extrapolating assumes that the change in PPPs is well-approximated by relative inflation. Deaton (2012) argues, however, that relative inflation will be a systematically biased estimate of the change in PPPs across countries. Specifically, he argues that under plausible conditions, the PPP of a poor country relative to a rich country will increase at a faster rate than implied by the difference in overall inflation. Figure 3 provides evidence in support of this contention. Panel A plots relative prices and income levels for benchmark or interpolated observations, while panel B plots observations based on extrapolations from earlier or later benchmarks. For both sets of observations, there is a significant positive relationship between price and income levels, but the regression line in panel A is significantly steeper than the line in panel B.<sup>31</sup> In online Appendix D we show more systematically that the extrapolation procedure used for nonbenchmark observations indeed lead to the supposed disappearance of the Balassa-Samuelson effect in early years.

The study of Bergin, Glick, and Taylor (2006) is based on PWT6 which relied exclusively on extrapolation of PPPs from a recent benchmark year, which would explain their findings. This illustrates the usefulness of including historical benchmark material and clearly distinguishing between benchmark/interpolated and extrapolated observations, as done in PWT8.

### *C. Capital and Productivity*

Traditionally, the main strength of PWT has been its information on GDP per capita, useful for comparing the standard of living across countries. Yet to gain an understanding of the (proximate) sources of the differences in living standards, we should analyze differences in the level of output, inputs, and productivity: see, e.g., Klenow and Rodríguez-Clare (1997); Hall and Jones (1999); and Caselli (2005). In PWT8, the introduction of relative prices of exports and imports and the resulting real  $GDP^o$  variable means that there is now a true measure of relative output. PWT has also long provided information on labor input, i.e., the number of workers, but information on physical capital has been absent since PWT version 6 and there has never been information in PWT on human capital or productivity. This has left researchers to their own devices in compiling productivity estimates. As a

<sup>31</sup> Note that we only include observations from ICP benchmark years (1970, 1975, 1980, 1985, 1996, and 2005) for a more balanced set of observations across the income spectrum in both panels. Online Appendix D shows results for the full range of years.

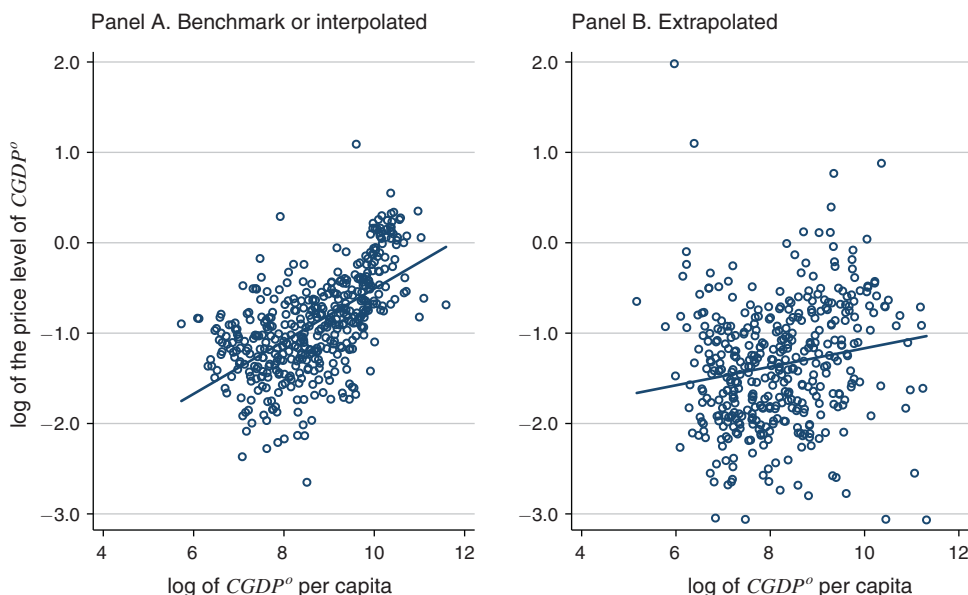


FIGURE 3. THE BALASSA-SAMUELSON EFFECT IN PWT8.1

*Notes:* Included are only observations in ICP benchmark years: 1970, 1975, 1980, 1985, 1996, and 2005. Observations are distinguished by whether the price level for a country is from that ICP benchmark, interpolated between ICP benchmarks, or extrapolated from an earlier or later benchmark. See online Appendix D for a comprehensive analysis. The solid line is the least-squares regression line; the slope of the regression line in panel B is significantly smaller than in panel A.

*Source:* Computations based on PWT8.1.

result these estimates tend to rely on numerous simplifying assumptions, such as a Cobb-Douglas production function and homogeneous physical capital.

The new version of PWT represents an important step forward by including measures of physical and human capital and estimates of productivity based on the translog production function (see Theorem 2) which allows for substitution elasticities to differ across countries and over time. The first novelty is to estimate physical capital stocks for all countries in PWT based on data of investment by asset. The second novelty is to estimate the share of labor income in GDP for a large majority of PWT countries. These are combined with (more standard) measures of human capital to arrive at measures of total factor productivity (TFP). A detailed description of the data is included as online Appendix C and here we provide an outline of the approach and show its implications for development accounting results as in Caselli (2005).

Physical capital stocks are computed by cumulating the depreciated past investments, but we distinguish investments by type of asset.<sup>32</sup> This has two important implications when contrasted with the study by Caselli (2005), which is representative for the broader literature. First, the average depreciation rate now varies across countries and over time, as countries differ in the asset composition

<sup>32</sup>Investment by type data is partly from National Accounts statistics, partly from estimates using the commodity-flow method along similar lines as Caselli and Wilson (2004).

of their capital stock and depreciation differs across assets. Second, while existing studies (implicitly) use the relative price of investment to compare the level of the capital stock across countries, we use information on the asset composition of the capital stock to compute a relative price of the capital stock. This relative price of the capital stock gives much larger weight to the price of buildings—which are comparatively cheap in poorer countries, than to the price of machinery, which is relatively more expensive as buildings are the longest-lived assets: see Hsieh and Klenow (2007). So while the price of investment goods relative to consumption goods declines rapidly with income—as in Hsieh and Klenow (2007)—there is a weaker relation with income levels when comparing the price of the capital stock to the price of consumption goods.

The typical approach in development accounting is to assume that the output elasticity of labor is identical across countries and constant over time at 0.7, yet the evidence in support of this assumption is modest at best. The oft-cited work of Gollin (2002) shows substantial cross-country variation in the income share of labor in GDP, as well as Bernanke and Gürkaynak (2002). More recently, Karabarbounis and Neiman (2014) shows that, for many countries, the labor share has been declining in the last two decades. In PWT8, we therefore estimate the share of labor income in GDP for as many countries and years as possible. Information on the labor compensation of employees is broadly available, but the labor compensation of self-employed workers needs to be separately estimated. Here we broadly follow the existing approaches in the literature, but on a substantially larger scale.<sup>33</sup> This yields some key findings, namely: (i) an average labor share of 0.52, which is much lower than the 0.7 that is typically assumed; (ii) no systematic variation of labor shares with income levels; (iii) declining labor shares over time in 89 of the 127 countries.

Combining the new information on labor shares, physical capital, and estimates of human capital (based on the average years of schooling of Barro and Lee 2013) yields data on overall factor inputs (denoted  $Q$ ) and relative productivity levels ( $CTFP$ ). These can be used to provide a variance analysis of real GDP per capita across countries as in Caselli (2005). Combining (20) with (23), we obtain a decomposition of current-price real GDP on the expenditure side:

$$\frac{CGDP_j^e}{CGDP_k^e} = CTFP_{jk} \times Q_T(\mathbf{v}_j, \mathbf{v}_k, \mathbf{w}_j, \mathbf{w}_k) \times \left( \frac{1 + Gap_j}{1 + Gap_k} \right),$$

where the  $Gap$  between real  $GDP^e$  and real  $GDP^o$  is defined by the various terms-of-trade and balance-of-payments expressions on the right of (20). We report summary statistics from this decomposition in Table 2 and illustrate how these new measures compare to the earlier measures based on simplifying assumptions, namely a Cobb-Douglas production function with labor share of 0.7 and homogeneous capital stock (baseline).

<sup>33</sup> This involves using data on total income (from capital and labor) of self-employed, assuming similar wages for self-employed as for employees and information on the importance in the economy of agriculture, the dominant sector for self-employed workers. See online Appendix C for details.

TABLE 2—COUNTING FOR CROSS-COUNTRY VARIATION OF  $CGDP^e$  PER CAPITA IN 2005

	Baseline	(1)	(2)
Variance ( $\ln(CGDP^e)$ )	1.433	1.433	1.433
Variance ( $\ln(1+Gap)$ )	0.006	0.006	0.006
Variance ( $\ln(Q)$ )	0.351	0.332	0.485
Variance ( $\ln(CTFP)$ )	0.412	0.452	0.345
Fraction of variance accounted for by factor inputs	0.253	0.232	0.338

Notes:  $CGDP^e$  is expenditure-based real GDP;  $Gap$  is the difference between expenditure-based and output-based real GDP;  $Q$  is inputs of physical and human capital per capita, and  $CTFP$  is total factor productivity. The baseline decomposition is based on a constant labor share of 0.7 and homogeneous capital. Variant (1) allows for asset heterogeneity and variant (2) also allows for variation in the labor share.

Source: Computations based on PWT8.1.

This exercise aims to account for differences in  $CGDP^e$  per capita by variation in the gap between  $CGDP^e$  and  $CGDP^o$ —the effect of the terms of trade on standards of living—variation in factor inputs and variation in TFP. The first column mimics the approach of Caselli (2005), the second column accounts for the heterogeneity of physical capital, and the third column also accounts for the heterogeneity of labor shares and this is our preferred measure. Accounting for labor share heterogeneity has an important impact on the variation in  $CGDP^e$  per capita that is accounted for by variation in factor inputs, which increases from 25.3 percent to 33.8 percent. The very small share of variation accounted for by the gap between  $CGDP^e$  and  $CGDP^o$  was already implicit in Figure 1, as there was no systematic relationship between this gap and income levels.

Important to note, though, is that physical capital in PWT only covers *produced* capital, such as buildings and machinery, not natural capital such as land or subsoil resources. This natural capital is particularly important in developing economies, as shown by Caselli and Feyrer (2007). Augmenting capital inputs with natural capital using data from World Bank (2011) leads to a decline in the variance of  $CGDP^e$  per capita accounted for by variation in factor inputs (to 27.6 percent), suggesting that efficiency differences in the use of natural capital might be bigger than that from produced capital. As yet, data are only available for a few recent years and are not yet ideally suited for cross-country comparisons of inputs levels. However, including natural capital would be an important future improvement for PWT.

## VII. Conclusions

From its inception, the International Comparisons Program (ICP), on which PWT is built, only collects the prices of final products—for consumption, investment, and the government—across countries. It was prohibitively expensive to further collect comparable prices for the whole range of industrial and intermediate inputs used in economies, many of which are also traded. This limitation means that calculations based on ICP prices only are best thought of as representing the standard of living of countries rather than their production possibilities. Feenstra et al. (2009) argued that a measure of the productive capacity of countries could be obtained by combining the ICP data with prices for exports and imports. These two approaches lead to

measures of real GDP on the expenditure-side and real GDP on the output-side, respectively, both of which are included in the new PWT version 8.1.

The second contribution of PWT8 is to improve upon the growth of real GDP previously reported in PWT, which was based on national accounts data. Johnson et al. (2013) criticized growth rates as being dependent on the benchmark year of ICP data, and thereby dependent on the version of PWT being used. That problem is resolved in PWT8 by using *multiple* ICP benchmarks: for all of our measures of real GDP, the growth rate will not change in between existing benchmark years as new benchmarks become available, unless the underlying nominal GDP data from the national accounts are revised. We have shown that incorporating multiple ICP benchmarks also ensures that relationships such as the Balassa-Samuelson effect remain apparent in the dataset, rather than disappearing when going back further in time.

The final contribution of PWT8 is to reintroduce a measure of the capital stock and, for the first time, include a measure of relative TFP across countries. We have shown that, compared to standard findings in the literature, cross-country variation in factor inputs can account for more of the cross-country variation in  $CGDP^e$  per capita. This is mostly because PWT8.1 incorporates new estimates of the labor share in GDP that vary in a meaningful fashion across countries and over time.

Taken together, these contributions show that PWT version 8 breaks new ground in providing a cross-country dataset that is closer linked to the theoretical concepts of welfare and production, more consistent over time and more transparent in its methods. It should be noted however, that revisions will remain part of future versions of PWT. There can be substantial changes to nominal and real national accounts data over time, which will be the principal source of changes in interpolated values as new versions of PWT become available. The release of the 2011 ICP provides new prices for final expenditure which, in conjunction with updated, quality-adjusted prices for exports and imports, will be used to compute real GDP on the expenditure side and output side in PWT version 9. The results for the period 2005–2011, which were *extrapolated* in PWT8, will then be *interpolated* between the 2005 and 2011 benchmarks in PWT version 9. Early analysis on the 2011 ICP prices suggests that they differ quite substantially from extrapolated prices using the 2005 benchmark (Deaton and Aten 2014; Inklaar and Rao 2014). Therefore, we can expect some discussion and analysis of the 2011 benchmark prices before they are used to revise the recent years and are incorporated into PWT version 9.

## REFERENCES

- Alcalá, Francisco, and Antonio Ciccone. 2004. "Trade and Productivity." *Quarterly Journal of Economics* 119 (2): 613–46.
- Alterman, William F., W. Erwin Diewert, and Robert C. Feenstra. 1999. *International Trade Price Indexes and Seasonal Commodities*. Washington, DC: US Department of Labor, Bureau of Labor Statistics.
- Balassa, Bela. 1964. "The Purchasing-power Parity Doctrine: A Reappraisal." *Journal of Political Economy* 72 (6): 584–96.
- Balk, Bert M. 2008. *Price and Quantity Index Numbers: Models for Measuring Aggregate Change and Difference*. Cambridge, UK: Cambridge University Press.
- Barro, Robert J., and Jong Wha Lee. 2013. "A New Data Set of Educational Attainment in the World, 1950–2010." *Journal of Development Economics* 104: 184–98.



- Basu, Susanto, Luigi Pascali, Fabio Schiantarelli, and Luis Serven. 2014. "Productivity and the Welfare of Nations." National Bureau of Economic Research Working Paper 17971.
- Bergin, Paul R., Reuven Glick, and Alan M. Taylor. 2006. "Productivity, Tradability, and the Long-Run Price Puzzle." *Journal of Monetary Economics* 53 (8): 2041–66.
- Bernanke, Ben S., and Refet S. Gürkaynak. 2002. "Is Growth Exogenous? Taking Mankiw, Romer, and Weil Seriously." In *NBER Macroeconomics Annual 2001*, edited by Ben S. Bernanke and Kenneth Rogoff, 11–72. Cambridge, MA: MIT Press.
- Burstein, Ariel, and Javier Cravino. 2015. "Measured Aggregate Gains from International Trade." *American Economic Journal: Macroeconomics* 7 (2): 181–218.
- Caselli, Francesco. 2005. "Accounting for Cross-Country Income Differences." In *Handbook of Economic Growth*, Vol. 1A, edited by Philippe Aghion and Steven N. Durlauf, 679–741. Amsterdam: Elsevier.
- Caselli, Francesco, and James Feyrer. 2007. "The Marginal Product of Capital." *Quarterly Journal of Economics* 122 (2): 535–68.
- Caselli, Francesco, and Daniel J. Wilson. 2004. "Importing Technology." *Journal of Monetary Economics* 51 (1): 1–32.
- Caves, Douglas W., Laurits R. Christensen, and W. Erwin Diewert. 1982a. "The Economic Theory of Index Numbers and the Measurement of Input, Output, and Productivity." *Econometrica* 50 (6): 1393–1414.
- Caves, Douglas W., Laurits R. Christensen, and W. Erwin Diewert. 1982b. "Multilateral Comparisons of Output, Input, and Productivity Using Superlative Index Numbers." *Economic Journal* 92 (365): 73–86.
- Deaton, Angus. 2012. "Consumer Price Indexes, Purchasing Power Parity Exchange Rates, and Updating." <http://goo.gl/58c9Rw>.
- Deaton, Angus, and Bettina Aten. 2014. "Trying to Understand the PPPs in ICP2011: Why Are the Results so Different?" National Bureau of Economic Research Working Paper 20244.
- De Loecker, Jan. 2009. "Recovering Markups from Production Data." *International Journal of Industrial Organization* 29 (3): 350–55.
- Diewert, W. Erwin. 1976. "Exact and Superlative Index Numbers." *Journal of Econometrics* 4 (2): 115–45.
- Diewert, W. Erwin, and Catherine J. Morrison. 1986. "Adjusting Outputs and Productivity Indexes for Changes in the Terms of Trade." *Economic Journal* 96 (383): 659–79.
- Feenstra, Robert C., Alan Heston, Marcel P. Timmer, and Haiyan Deng. 2009. "Estimating Real Production and Expenditures across Nations: A Proposal for Improving the Penn World Tables." *Review of Economics and Statistics* 91 (1): 201–12.
- Feenstra, Robert C., Robert Inklaar, and Marcel P. Timmer. 2015a. "The Next Generation of the Penn World Table: Dataset." *American Economic Review*. <http://dx.doi.org/10.1257/aer20130954>.
- Feenstra, Robert C., Robert Inklaar, and Marcel P. Timmer. 2015b. "What is New in PWT 8.1?" [www.rug.nl/research/ggdc/data/pwt/v81/what\\_is\\_new\\_in\\_pwt\\_81.pdf](http://www.rug.nl/research/ggdc/data/pwt/v81/what_is_new_in_pwt_81.pdf).
- Feenstra, Robert C., and Hiau Looi Kee. 2008. "Export Variety and Country Productivity: Estimating the Monopolistic Competition Model with Endogenous Productivity." *Journal of International Economics* 74 (2): 500–18.
- Feenstra, Robert C., Hong Ma, J. Peter Neary, and D. S. Prasada Rao. 2013. "Who Shrunk China? Puzzles in the Measurement of Real GDP." *Economic Journal* 123 (573): 1100–129.
- Feenstra, Robert C., Hong Ma, and D. S. Prasada Rao. 2009. "Consistent Comparisons of Real Incomes across Time and Space." *Macroeconomic Dynamics* 13 (S2): 169–93.
- Feenstra, Robert C., and John Romalis. 2014. "International Prices and Endogenous Quality." *Quarterly Journal of Economics* 129 (2): 477–527.
- Gerschenkron, Alexander. 1951. *A Dollar Index of Soviet Machinery Output, 1927–28 to 1937*. Report R-197. Santa Monica: Rand Corporation.
- Gollin, Douglas. 2002. "Getting Income Shares Right." *Journal of Political Economy* 110 (2): 458–74.
- Hall, Robert E., and Charles I. Jones. 1999. "Why Do Some Countries Produce So Much More Output Per Worker Than Others?" *Quarterly Journal of Economics* 114 (1): 83–116.
- Hallak, Juan Carlos, and Peter K. Schott. 2011. "Estimating Cross-country Differences in Product Quality." *Quarterly Journal of Economics* 126 (1): 417–74.
- Hanushek, Eric A., and Ludger Woessmann. 2012. "Do Better Schools Lead to More Growth? Cognitive Skills, Economic Outcomes, and Causation." *Journal of Economic Growth* 17 (4): 267–321.
- Herrendorf, Berthold, Richard Rogerson, and Akos Valentinyi. 2013. "Two Perspectives on Preferences and Structural Transformation." *American Economic Review* 103 (7): 2752–89.
- Heston, Alan. 2013. "Government Services: Productivity Adjustments." In *Measuring the Real Size of the World Economy*, 413–40. Washington, DC: World Bank.



- Heston, Alan, and Robert Summers.** 1996. "International Price and Quantity Comparisons: Potentials and Pitfalls." *American Economic Review* 86 (2): 20–24.
- Hill, Robert J.** 1999. "Comparing Price Levels across Countries Using Minimum-Spanning Trees." *Review of Economics and Statistics* 81 (1): 135–42.
- Hsieh, Chang-Tai, and Peter J. Klenow.** 2007. "Relative Prices and Relative Prosperity." *American Economic Review* 97 (3): 562–85.
- Hsieh, Chang-Tai, and Peter J. Klenow.** 2010. "Development Accounting." *American Economic Journal: Macroeconomics* 2 (1): 207–23.
- Inklaar, Robert, and D. S. Prasada Rao.** 2014. "Cross-Country Income Levels over Time: Did the Developing World Suddenly Become Much Richer?" GGDC Research Memorandum 151. Groningen: GGDC.
- Jerven, Morten.** 2013. "Comparability of GDP Estimates in Sub-Saharan Africa: The Effect of Revisions in Source and Methods since Structural Adjustment." *Review of Income and Wealth* 59 (1): S16–36.
- Johnson, Simon, William Larson, Chris Papageorgiou, and Arvind Subramanian.** 2013. "Is Newer Better? Penn World Table Revisions and Their Impact on Growth Estimates." *Journal of Monetary Economics* 60 (2): 255–74.
- Jones, Charles I., and Peter J. Klenow.** 2011. "Beyond GDP? Welfare across Countries and Time." National Bureau of Economic Research Working Paper 16352.
- Karabarbounis, Loukas, and Brent Neiman.** 2014. "The Global Decline of the Labor Share." *Quarterly Journal of Economics* 129 (1): 61–103.
- Khandelwal, Amit.** 2010. "The Long and Short (of) Quality Ladders." *Review of Economic Studies* 77 (4): 1450–76.
- Klenow, Peter, and Andrés Rodríguez-Clare.** 1997. "The Neoclassical Revival in Growth Economics: Has It Gone Too Far?" In *NBER Macroeconomics Annual 1997*, edited by Ben S. Bernanke and Julio J. Rotemberg, 73–114. Cambridge, MA: MIT Press.
- Kohli, Ulrich.** 2004. "Real GDP, Real Domestic Income, and Terms-of-Trade Changes." *Journal of International Economics* 62 (1): 83–106.
- Kohli, Ulrich.** 2006. "Real GDP, Real GDI, and Trading Gains: Canada, 1981–2005." *International Productivity Monitor* 13: 46–56.
- Lagakos, David, Benjamin Moll, Tommaso Porzio, Nancy Qian, and Todd Schoellman.** 2014. "Experience Matters: Human Capital and Development Accounting." National Bureau of Economic Research Working Paper 18602.
- Lucas, Robert E., Jr.** 1990. "Why Doesn't Capital Flow from Rich to Poor Countries?" *American Economic Review* 80 (2): 92–96.
- Neary, Peter J.** 2004. "Rationalizing the Penn World Table: True Multilateral Indices for International Comparisons of Real Income." *American Economic Review* 94 (5): 1411–28.
- Obstfeld, Maurice, and Ken Rogoff.** 1996. *Foundations of International Macroeconomics*. Cambridge, MA: MIT Press.
- Officer, Lawrence H.** 1982. *Purchasing Power Parity and Exchange Rates: Theory, Evidence and Relevance*. Greenwich, CT: JAI Press.
- Reinsdorf, Marshall B.** 2010. "Terms of Trade Effects: Theory And Measurement." *Review of Income and Wealth* 56 (S1): S177–S205.
- Samuelson, Paul A.** 1964. "Theoretical Notes on Trade Problems." *Review of Economics and Statistics* 46 (2): 145–54.
- Samuelson, Paul A.** 1994. "Facets of Balassa-Samuelson Thirty Years Later." *Review of International Economics* 2 (3): 201–26.
- Summers, Robert, and Alan Heston.** 1988. "A New Set of International Comparisons of Real Product and Price Levels: Estimates for 130 Countries, 1950–1985." *Review of Income and Wealth* 34 (1): 1–25.
- Summers, Robert, and Alan Heston.** 1991. "The Penn World Table (Mark 5): An Expanded Set of International Comparisons, 1950–1988." *Quarterly Journal of Economics* 106 (2): 327–68.
- Végh, Carlos A.** 2014. *Open Economy Macroeconomics in Developing Countries*. Cambridge, MA: MIT Press.
- World Bank.** 2011. *The Changing Wealth of Nations: Measuring Sustainable Development in the New Millennium*. Washington, DC: World Bank.
- World Bank.** 2014. *Purchasing Power Parities and the Real Size of World Economies: A Comprehensive Report of the 2011 International Comparison Program*. Washington, DC: World Bank.

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7. Zhiyang Shen, Kaixuan Bai, Tianyang Hong, Tomas Balezentis. 2021. Evaluation of carbon shadow price within a non-parametric meta-frontier framework: The case of OECD, ASEAN and BRICS. *Applied Energy* 299, 117275. [[Crossref](#)]
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14. Eduardo Gonçalves, Juliana Gonçalves Taveira, Adalberto Labrador, João Gabriel Pio. 2021. Is trade openness a carrier of knowledge spillovers for developed and developing countries?. *Structural Change and Economic Dynamics* 58, 66-75. [[Crossref](#)]
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27. Rafael Acevedo, Jose U. Mora, Andrew T. Young. 2021. The government spending multiplier in Latin American countries: Does the institutional environment matter?. *Journal of Financial Economic Policy* **ahead-of-print**:ahead-of-print. . [[Crossref](#)]
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40. Ruba A. Aljarallah. 2021. An assessment of the economic impact of natural resource rents in kingdom of Saudi Arabia. *Resources Policy* **72**, 102070. [[Crossref](#)]
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43. Qianqian Yuan, Tomas Baležentis, Zhiyang Shen, Dalia Streimikiene. 2021. Economic and environmental performance of the belt and road countries under convex and nonconvex production technologies. *Journal of Asian Economics* **75**, 101321. [[Crossref](#)]
44. Keun Lee, Jongho Lee, Juneyoung Lee. 2021. Variety of national innovation systems (NIS) and alternative pathways to growth beyond the middle-income stage: Balanced, imbalanced, catching-up, and trapped NIS. *World Development* **144**, 105472. [[Crossref](#)]
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50. Fernando Río. 2021. The impact of rent seeking on social infrastructure and productivity. *Review of Development Economics* **25**:3, 1741-1760. [[Crossref](#)]
51. Frank Pothén, Michael Hübler. 2021. A forward calibration method for analyzing energy policy in new quantitative trade models. *Energy Economics* **100**, 105352. [[Crossref](#)]
52. Long Hai Vo, Thai-Hà Lê. 2021. Eatery, energy, environment and economic system, 1970–2017: Understanding volatility spillover patterns in a global sample. *Energy Economics* **100**, 105391. [[Crossref](#)]
53. Dario Debowicz, Alejandro Saporiti, Yizhi Wang. 2021. Redistribution, power sharing and inequality concern. *Social Choice and Welfare* **57**:2, 197-228. [[Crossref](#)]
54. Gibrán Cruz-Martínez. 2021. Mapping Welfare State Development in (post) Neoliberal Latin America. *Social Indicators Research* **157**:1, 175-201. [[Crossref](#)]
55. Alistair Dieppe, Neville Francis, Gene Kindberg-Hanlon. 2021. Technological and Non-Technological Drivers of Productivity Dynamics in Developed and Emerging Market Economies. *Journal of Economic Dynamics and Control* **115**, 104216. [[Crossref](#)]
56. Sèna Kimm Gnangnon. 2021. Effect of Poverty on Financial Development: Does Trade Openness Matter?. *The Quarterly Review of Economics and Finance* **86**. . [[Crossref](#)]

57. Esteban Colla-De-Robertis, Rafael Garduno Rivera. 2021. The effect of a free trade agreement with the United States on member countries' per capita GDP: A synthetic control analysis. *Regional Science Policy & Practice* 13:4, 1129-1145. [[Crossref](#)]
58. Jonathan A Chu. 2021. Liberal Ideology and Foreign Opinion on China. *International Studies Quarterly* 61. . [[Crossref](#)]
59. Natércia Fortuna, António Neto. 2021. The impact of labour market institutions on income inequality: evidence from OECD countries. *Applied Economics Letters* 28:13, 1110-1113. [[Crossref](#)]
60. Thomas Ziesemer. 2021. Labour-augmenting technical change data for alternative elasticities of substitution: growth, slowdown, and distribution dynamics. *Economics of Innovation and New Technology* 35, 1-27. [[Crossref](#)]
61. Francis Teal. 2021. Firm Size, Employment and Value Added in African Manufacturing Firms: Why Ghana Needs Its 1%. *Journal of African Economies* 293. . [[Crossref](#)]
62. Canh Phuc Nguyen, Thanh Dinh Su. 2021. The Vulnerability Effect of International Tourism on a Destination's Economy. *Tourism Planning & Development* 42, 1-21. [[Crossref](#)]
63. Addisu A Lashitew, Michael L Ross, Eric Werker. 2021. What Drives Successful Economic Diversification in Resource-Rich Countries?. *The World Bank Research Observer* 36:2, 164-196. [[Crossref](#)]
64. Martin Stepanek. 2021. Sectoral Impacts of International Labour Migration and Population Ageing in the Czech Republic. *Computational Economics* 1. . [[Crossref](#)]
65. Jean Donovan Rasamoelison, Susan Averett, David Stifel. 2021. International student-migrant flows and growth in low- and middle-income countries: brain gain or brain drain?. *Applied Economics* 53:34, 3913-3930. [[Crossref](#)]
66. Julia Grübler, Mahdi Ghodsi, Robert Stehrer. 2021. Import demand elasticities revisited. *The Journal of International Trade & Economic Development* 79, 1-29. [[Crossref](#)]
67. Magnus Reif, Mewael F. Tesfaselassie, Maik H. Wolters. 2021. Technological Growth and Hours in the Long Run: Theory and Evidence. *Economica* 101. . [[Crossref](#)]
68. Brian Urlacher. 2021. State Building and Peace Agreement Implementation. *Defence and Peace Economics* 4, 1-16. [[Crossref](#)]
69. Fabio Monteforte, Mathan Satchi, Jonathan R. W. Temple. 2021. Development priorities: the relative benefits of agricultural growth. *Oxford Economic Papers* 73:3, 1122-1152. [[Crossref](#)]
70. Désiré Kanga, Christine Oughton, Laurence Harris, Victor Murinde. 2021. The diffusion of fintech, financial inclusion and income per capita. *The European Journal of Finance* 75, 1-29. [[Crossref](#)]
71. Daregot Berihun, Passel Van Steven. 2021. Climate variability and macroeconomic output in Ethiopia: the analysis of nexus and impact via asymmetric autoregressive distributive lag cointegration method. *Environment, Development and Sustainability* 3. . [[Crossref](#)]
72. Alexandra Ferreira-Lopes, Pedro Linhares, Luís Filipe Martins, Tiago Neves Sequeira. 2021. Quantitative easing and economic growth in Japan: A meta-analysis. *Journal of Economic Surveys* 330. . [[Crossref](#)]
73. Yanyan Gao, Leizhen Zang. 2021. Is democracy pro-poor ? An empirical test of the Sen Hypothesis based on global evidence. *Governance* 95. . [[Crossref](#)]
74. Sharmila Devadas, Ibrahim Elbadawi, Norman V. Loayza. 2021. Growth in Syria: losses from the war and potential recovery in the aftermath. *Middle East Development Journal* 3, 1-30. [[Crossref](#)]
75. Olga Lavrinenko. 2021. Exploring Protest in Europe with a Multi-Level Cross-National Test of the Structural Cognitive Model. *International Journal of Sociology* 51:4, 321-335. [[Crossref](#)]



76. Muhammad Zahid Rafique, Abdul Majeed Nadeem, Wanjun Xia, Majid Ikram, Hafiz Muhammad Shoaib, Umer Shahzad. 2021. Does economic complexity matter for environmental sustainability? Using ecological footprint as an indicator. *Environment, Development and Sustainability* **12**. . [\[Crossref\]](#)
77. Florent McIsaac. 2021. Testing Goodwin with a stochastic differential approach—The United States (1948–2019). *Metroeconomica* **22**. . [\[Crossref\]](#)
78. Nusrate Aziz, Belayet Hossain, Laura Lamb. 2021. Does green policy pay dividends?. *Environmental Economics and Policy Studies* **100**. . [\[Crossref\]](#)
79. Mohammad Mafizur Rahman, Rabindra Nepal, Khosrul Alam. 2021. Impacts of human capital, exports, economic growth and energy consumption on CO2 emissions of a cross-sectionally dependent panel: Evidence from the newly industrialized countries (NICs). *Environmental Science & Policy* **121**, 24–36. [\[Crossref\]](#)
80. Barnadev Mahapatra, Mohd Irfan. 2021. Asymmetric impacts of energy efficiency on carbon emissions: A comparative analysis between developed and developing economies. *Energy* **227**, 120485. [\[Crossref\]](#)
81. Andrew Dawson. 2021. The achilles heel of democracy? A macro cross-national assessment of the correlates of state legitimacy. *Social Science Research* **97**, 102574. [\[Crossref\]](#)
82. Xingyuan Yao, Xiaobo Tang. 2021. Does financial structure affect CO2 emissions? Evidence from G20 countries. *Finance Research Letters* **41**, 101791. [\[Crossref\]](#)
83. Canh Phuc Nguyen, Muhammad Ali Nasir. 2021. An inquiry into the nexus between energy poverty and income inequality in the light of global evidence. *Energy Economics* **99**, 105289. [\[Crossref\]](#)
84. Ángel S. Marrero, Gustavo A. Marrero, Rosa Marina González, Jesús Rodríguez-López. 2021. Convergence in road transport CO2 emissions in Europe. *Energy Economics* **99**, 105322. [\[Crossref\]](#)
85. Tino Berger, Gerdie Everaert, Lorenzo Pozzi. 2021. Testing for international business cycles: A multilevel factor model with stochastic factor selection. *Journal of Economic Dynamics and Control* **128**, 104134. [\[Crossref\]](#)
86. Christian Glocker, Philipp Piribauer. 2021. The determinants of output losses during the Covid-19 pandemic. *Economics Letters* **204**, 109923. [\[Crossref\]](#)
87. David Kohn, Fernando Leibovici, Håkon Tretvoll. 2021. Trade in Commodities and Business Cycle Volatility. *American Economic Journal: Macroeconomics* **13**:3, 173–208. [\[Abstract\]](#) [\[View PDF article\]](#) [\[PDF with links\]](#)
88. Mohammad Afzalinejad. 2021. Evaluating radial efficiency considering environmental factors: A generalization of classical DEA. *Measurement* **179**, 109497. [\[Crossref\]](#)
89. Katja Mann. 2021. Does foreign capital go where the returns are? Financial integration and capital allocation efficiency 1. *International Journal of Finance & Economics* **26**:3, 3945–3971. [\[Crossref\]](#)
90. Hem C. Basnet, Satis C. Devkota, Mukti P. Upadhyay. 2021. Terms of trade and real domestic income: New evidence from South and Southeast Asia. *International Journal of Finance & Economics* **26**:3, 4315–4331. [\[Crossref\]](#)
91. Albano Rikani, Jacob Schewe. 2021. Global bilateral migration projections accounting for diasporas, transit and return flows, and poverty constraints. *Demographic Research* **45**, 87–140. [\[Crossref\]](#)
92. Jamie Bologna Pavlik, Andrew T. Young. 2021. The legacy of representation in medieval Europe for incomes and institutions today. *Southern Economic Journal* **88**:1, 414–448. [\[Crossref\]](#)
93. Jakub Bartak, Łukasz Jabłoński, Agnieszka Jastrzębska. 2021. Examining GDP Growth and Its Volatility: An Episodic Approach. *Entropy* **23**:7, 890. [\[Crossref\]](#)
94. Andrzej Cieřlik, Mahdi Ghodsi. 2021. Economic Sentiment Indicators and Foreign Direct Investment: Empirical Evidence from the European Union Countries. *International Economics* **104**. . [\[Crossref\]](#)



95. Emmanuel Amissah, Spiros Bougheas, Fabrice Defever, Rod Falvey. 2021. Financial system architecture and the patterns of international trade. *European Economic Review* **136**, 103751. [[Crossref](#)]
96. Maria Forslund. 2021. Is it adding up? The cumulative effect of sickness benefits on life expectancy in old age in 15 OECD countries 1960–2015. *Health & Place* **70**, 102607. [[Crossref](#)]
97. John C. Heater, Suresh Nallareddy, Mohan Venkatachalam. 2021. Aggregate Accruals and Market Returns: The Role of Aggregate M&A Activity. *Journal of Accounting and Economics* **27**, 101432. [[Crossref](#)]
98. Gladys Salazar Olives. 2021. Apertura comercial, inversión doméstica y crecimiento económico en Ecuador. Investigación empírica 1950–2019. *SUMMA. Revista disciplinaria en ciencias económicas y sociales* **3:2**, 1–29. [[Crossref](#)]
99. Jindao Chen, Yuhong Wang, Qian Shi, Xu Peng, Juhuan Zheng. 2021. An international comparison analysis of CO 2 emissions in the construction industry. *Sustainable Development* **29:4**, 754–767. [[Crossref](#)]
100. Flávio L. Pinheiro, Dominik Hartmann, Ron Boschma, César A. Hidalgo. 2021. The time and frequency of unrelated diversification. *Research Policy* **46**, 104323. [[Crossref](#)]
101. J. Hinkel, L. Feyen, M. Hemer, G. Cozannet, D. Lincke, M. Marcos, L. Mentaschi, J. L. Merkens, H. Moel, S. Muis, R. J. Nicholls, A. T. Vafeidis, R. S. W. Wal, M. I. Vousdoukas, T. Wahl, P. J. Ward, C. Wolff. 2021. Uncertainty and Bias in Global to Regional Scale Assessments of Current and Future Coastal Flood Risk. *Earth's Future* **9:7**. . [[Crossref](#)]
102. Sudeshna Ghosh. 2021. The Determinants of Fertility and Economic Uncertainty: An Application of the NARDL Model for Hong Kong and South Korea. *Millennial Asia* **1**, 097639962110184. [[Crossref](#)]
103. David S. Brown. 2021. Democracy and the Supply of Labor. *Studies in Comparative International Development* **122**. . [[Crossref](#)]
104. Folurunsho M. Ajide. 2021. Entrepreneurship and productivity in Africa: the role of institutions. *Journal of Sustainable Finance & Investment* **9**, 1–22. [[Crossref](#)]
105. Likai Chen, Ekaterina Smetanina, Wei Biao Wu. 2021. Estimation of nonstationary nonparametric regression model with multiplicative structure. *The Econometrics Journal* **77**. . [[Crossref](#)]
106. Juliana Salomao, Liliana Varela. 2021. Exchange Rate Exposure and Firm Dynamics. *The Review of Economic Studies* **10**. . [[Crossref](#)]
107. Daron Acemoglu, Pascual Restrepo. 2021. Demographics and Automation. *The Review of Economic Studies* **113**. . [[Crossref](#)]
108. Alistair Dieppe, Sinem Kiliç Çelik, Gene Kindberg-Hanlon. Global Productivity Trends 1–38. [[Crossref](#)]
109. Gene Kindberg-Hanlon, Cedric Okou. Productivity Convergence: Is Anyone Catching Up? 155–208. [[Crossref](#)]
110. Barsha Nibedita, Mohd Irfan. 2021. The role of energy efficiency and energy diversity in reducing carbon emissions: empirical evidence on the long-run trade-off or synergy in emerging economies. *Environmental Science and Pollution Research* **88**. . [[Crossref](#)]
111. Hazwan Haini, Pang Wei Loon. 2021. Does Government Ideology Affect the Relationship Between Government Spending and Economic Growth?. *Economic Papers: A journal of applied economics and policy* **102**. . [[Crossref](#)]
112. Huaping Sun, Bless Kofi Edziah, Anthony Kwaku Kporsu, Samuel Asumadu Sarkodie, Farhad Taghizadeh-Hesary. 2021. Energy efficiency: The role of technological innovation and knowledge spillover. *Technological Forecasting and Social Change* **167**, 120659. [[Crossref](#)]
113. Katarzyna Szarzec, Ákos Dombi, Piotr Matuszak. 2021. State-owned enterprises and economic growth: Evidence from the post-Lehman period. *Economic Modelling* **99**, 105490. [[Crossref](#)]

114. Zack P. Grant. 2021. Crisis and Convergence: How the Combination of a Weak Economy and Mainstream Party Ideological De-Polarization Fuels Anti-System Support. *Comparative Political Studies* 54:7, 1256-1291. [[Crossref](#)]
115. Jung Seek Kim. 2021. National Culture and the Cyclical Behavior of Research-and-Development Expenditure. *Journal of International Marketing* 29:2, 81-102. [[Crossref](#)]
116. Christina Bampatsou, George Halkos, Christina Beneki. 2021. Energy and material flow management to improve EU productivity. *Economic Analysis and Policy* 70, 83-93. [[Crossref](#)]
117. Minsoo Han, Ju Hyun Pyun. 2021. Markups and income inequality: Causal links, 1975-2011. *Journal of Comparative Economics* 49:2, 290-312. [[Crossref](#)]
118. Giovanni Dosi, Federico Riccio, Maria Enrica Virgillito. 2021. Varieties of deindustrialization and patterns of diversification: why microchips are not potato chips. *Structural Change and Economic Dynamics* 57, 182-202. [[Crossref](#)]
119. Alberto José Hurtado Briceño, Sadcidi Zerpa de Hurtado, José U. Mora Mora. 2021. Economic and commercial convergence in Latin America. How are these countries doing so far?. *Structural Change and Economic Dynamics* 57, 239-250. [[Crossref](#)]
120. Barnabé Walheer. 2021. Labor productivity and technology heterogeneity. *Journal of Macroeconomics* 68, 103290. [[Crossref](#)]
121. Christian Bjørnskov. 2021. Civic honesty and cultures of trust. *Journal of Behavioral and Experimental Economics* 92, 101693. [[Crossref](#)]
122. Christina Bampatsou, George Halkos. 2021. Non-Parametric Computational Measures for the Analysis of Resource Productivity. *Energies* 14:11, 3114. [[Crossref](#)]
123. MEHMET HUSEYIN BILGIN, GIRAY GOZGOR, PETER RANGAZAS. 2021. IMMIGRATION, INNOVATION, AND ECONOMIC GROWTH. *The Singapore Economic Review* 66:03, 685-699. [[Crossref](#)]
124. Kai Zhao. 2021. Competition of International Trade, Technology Spillover, and R&D Innovation. *Journal of the Knowledge Economy* 12:2, 676-694. [[Crossref](#)]
125. Klaus Gründler, Arye L. Hillman. 2021. Ambiguous protection. *European Journal of Political Economy* 68, 102009. [[Crossref](#)]
126. Edward R. Lawrence, Mehul Raithatha, Ivan Rodriguez. 2021. The effect of cultural and institutional factors on initiation, completion, and duration of cross-border acquisitions. *Journal of Corporate Finance* 68, 101950. [[Crossref](#)]
127. Gwangeun Choi. 2021. Individuals' socioeconomic position, inequality perceptions, and redistributive preferences in OECD countries. *The Journal of Economic Inequality* 19:2, 239-264. [[Crossref](#)]
128. Pavel Zdražil, Ivana Kraftová. 2021. Indirect Estimation of the Development of Capital Productivity in the Regions: The Case of Poland. *E+M Ekonomie a Management* 24:2, 4-20. [[Crossref](#)]
129. David E. Bloom, Alex Khoury, Vadim Kufenko, Klaus Prettnner. 2021. Spurring Economic Growth through Human Development: Research Results and Guidance for Policymakers. *Population and Development Review* 47:2, 377-409. [[Crossref](#)]
130. Aweng Peter Majok Garang, Hatice Erkekoglu. 2021. Convergence Triggers in Africa: Evidence from Convergence Clubs and Panel Models. *South African Journal of Economics* 89:2, 218-245. [[Crossref](#)]
131. Christian Bjørnskov, Stefan Voigt. 2021. Is constitutionalized media freedom only window dressing? Evidence from terrorist attacks. *Public Choice* 187:3-4, 321-348. [[Crossref](#)]
132. HALIT YANIKKAYA, ABDULLAH ALTUN. 2021. BEYOND CONVENTIONAL TRADE: TRADE OPENNESS IMPLICATIONS OF TRADE IN VALUE ADDED. *The Singapore Economic Review* 66:04, 973-995. [[Crossref](#)]

133. Abdurrasheed Olayinka Sirajudeen, Teik Hua Law, Shaw Voon Wong, Fauzan Mohd Jakarni, Choy Peng Ng. 2021. The sources of the Kuznets relationship between the road deaths to road injuries ratio and economic growth. *Journal of Safety Research* 59. . [\[Crossref\]](#)
134. Peter Eppinger, Bohdan Kukharskyy. 2021. Contracting institutions and firm integration around the world. *European Economic Review* 97, 103815. [\[Crossref\]](#)
135. Edward L. Glaeser. 2021. What can developing cities today learn from the urban past?. *Regional Science and Urban Economics* 110, 103698. [\[Crossref\]](#)
136. Mitja Kovac, Rok Spruk. 2021. Diversification of procedural and administrative costs and innovation: Some firm-level evidence. *International Journal of Innovation Studies* 5:2, 56-98. [\[Crossref\]](#)
137. Katarzyna Metelska-Szaniawska, Jacek Lewkowicz. 2021. Post-socialist “illiberal democracies”: do de jure constitutional rights matter?. *Constitutional Political Economy* 32:2, 233-265. [\[Crossref\]](#)
138. Charlie Thame. 2021. The economic corridors paradigm as extractivism: Four theses for a historical materialist framework. *Review of International Studies* XIII, 1-21. [\[Crossref\]](#)
139. Canh Phuc Nguyen, Thanh Dinh Su. 2021. The ‘vicious cycle’ of energy poverty and productivity: insights from 45 developing countries. *Environmental Science and Pollution Research* 26. . [\[Crossref\]](#)
140. Toni Juuti. 2021. The role of financial development in the relationship between income inequality and economic growth: an empirical approach using cross-country panel data. *Quality & Quantity* 37. . [\[Crossref\]](#)
141. Han Cheng. 2021. Will Financial Liberalization Help China to Invest More Efficiently? Evidence from China’s Saving and Investment from 1993 to 2017. *The Chinese Economy* 1, 1-21. [\[Crossref\]](#)
142. Cristian Incaltarau, Ilkhom Sharipov, Gabriela Carmen Pascariu, Teodor Lucian Moga. 2021. Growth and convergence in Eastern Partnership and Central Asian countries since the dissolution of the USSR —embarking on different development paths?. *Development Policy Review* 16. . [\[Crossref\]](#)
143. Bill Gibson, Diane Flaherty. 2021. Modeling functional and juridical informality: a guide for data-driven policy. *International Review of Applied Economics* 40, 1-25. [\[Crossref\]](#)
144. Mohd Irfan. 2021. Low-carbon energy strategies and economic growth in developed and developing economies: the case of energy efficiency and energy diversity. *Environmental Science and Pollution Research* 60. . [\[Crossref\]](#)
145. Delphin Kamanda Espoir, Nicholas Ngepah. 2021. Income distribution and total factor productivity: a cross-country panel cointegration analysis. *International Economics and Economic Policy* 98. . [\[Crossref\]](#)
146. Hazwan Haini. 2021. Financial access and the finance–growth nexus: evidence from developing economies. *International Journal of Social Economics* 48:5, 693-708. [\[Crossref\]](#)
147. Quanliang Ye, Edgar G. Hertwich, Maarten S. Krol, David Font Vivanco, Amanda W. Lounsbury, Xinzhu Zheng, Arjen Y. Hoekstra, Yutao Wang, Ranran Wang. 2021. Linking the Environmental Pressures of China’s Capital Development to Global Final Consumption of the Past Decades and into the Future. *Environmental Science & Technology* 55:9, 6421-6429. [\[Crossref\]](#)
148. Mercedes Campi, Marco Dueñas, Giorgio Fagiolo. 2021. Specialization in food production affects global food security and food systems sustainability. *World Development* 141, 105411. [\[Crossref\]](#)
149. Andreas Bergh, Christian Bjørnskov. 2021. Does economic freedom boost growth for everyone?. *Kyklos* 74:2, 170-186. [\[Crossref\]](#)
150. Jayson Beckman, Munisamy Gopinath, Kamron Daugherty. 2021. Options for ASEAN trade expansion: Within, plus three or six, European Union or the United States?. *The World Economy* 44:5, 1177-1204. [\[Crossref\]](#)
151. Théophile T. Azomahou, Hibret Maemir, Hassen A. Wako. 2021. Contractual frictions and margins of trade. *Journal of Comparative Economics* 68. . [\[Crossref\]](#)

152. Muazu Ibrahim, Xuan Vinh Vo, Olufemi Adewale Aluko. 2021. Structural transformation—Income inequality nexus in Africa: Does the Developer's dilemma hold?. *Journal of Public Affairs* 21:2. . [\[Crossref\]](#)
153. Nektarios A. Michail. 2021. The impact of conflict on the exchange rate of developing economies. *Review of Development Economics* 25:2, 916-930. [\[Crossref\]](#)
154. Theodore R. Breton, Andrew S. Breton. 2021. Growth in a macro-Mincer model: Good results with schooling and experience interactions. *Review of Development Economics* 25:2, 563-581. [\[Crossref\]](#)
155. Irene Fensore, Stefan Legge, Lukas Schmid. 2021. Ancestry and international trade. *Journal of Comparative Economics* 8. . [\[Crossref\]](#)
156. Taiwo Akinlo, Dauda Olalekan Yinusa, Akintoye Victor Adejumo. 2021. Financial development and real sector in sub-Saharan Africa. *Economic Change and Restructuring* 54:2, 417-455. [\[Crossref\]](#)
157. Carlos Ivan Simonsen Leal, Paulo N. Figueiredo. 2021. Inovação tecnológica no Brasil: desafios e insumos para políticas públicas. *Revista de Administração Pública* 55:3, 512-537. [\[Crossref\]](#)
158. Mohammad Mafizur Rahman, Khosrul Alam. 2021. Exploring the driving factors of economic growth in the world's largest economies. *Heliyon* 7:5, e07109. [\[Crossref\]](#)
159. Michihito Ando, Masato Furuichi, Yoshihiro Kaneko. 2021. Does universal long-term care insurance boost female labor force participation? Macro-level evidence. *IZA Journal of Labor Policy* 11:1. . [\[Crossref\]](#)
160. Michał Mackiewicz. 2021. The sustainability of fiscal policy in southern African countries—a comparative empirical perspective. *International Journal of Emerging Markets* ahead-of-print:ahead-of-print. . [\[Crossref\]](#)
161. Shihe Fu, V Brian Viard, Peng Zhang. 2021. Air Pollution and Manufacturing Firm Productivity: Nationwide Estimates for China. *The Economic Journal* 3. . [\[Crossref\]](#)
162. Ana Ortigoza, Ariela Braverman, Philipp Hessel, Vanessa Di Cecco, Amélia Augusta Friche, Waleska Teixeira Caiaffa, Ana V. Diez Roux. 2021. Women's empowerment and infant mortality in Latin America: evidence from 286 cities. *Cities & Health* 16, 1-9. [\[Crossref\]](#)
163. Marta De Philippis, Federico Rossi. 2021. Parents, Schools and Human Capital Differences Across Countries. *Journal of the European Economic Association* 19:2, 1364-1406. [\[Crossref\]](#)
164. Noam Angrist, Simeon Djankov, Pinelopi K. Goldberg, Harry A. Patrinos. 2021. Measuring human capital using global learning data. *Nature* 592:7854, 403-408. [\[Crossref\]](#)
165. Lindsay Reid. 2021. Peace agreements and women's political rights following civil war. *Journal of Peace Research* 17, 002234332097274. [\[Crossref\]](#)
166. TANYA BAGASHKA, CRISTINA BODEA, SUNG MIN HAN. 2021. Populism's rise in post-communist countries: Breaking electoral promises and incumbent left parties' vote losses. *European Journal of Political Research* 55. . [\[Crossref\]](#)
167. Jared Furuta, Evan Schofer, Shawn Wick. 2021. The Effects of High Stakes Educational Testing on Enrollments in an Era of Hyper-Expansion: Cross-National Evidence, 1960–2010. *Social Forces* 99:4, 1631-1657. [\[Crossref\]](#)
168. Kaitlin Alper, Evelyne Huber, John D Stephens. 2021. Poverty and Social Rights Among the Working Age Population in Post-Industrial Democracies. *Social Forces* 99:4, 1710-1744. [\[Crossref\]](#)
169. Mercedes Campi, Alessandro Nuvolari. 2021. Intellectual Property Rights and Agricultural Development: Evidence from a Worldwide Index of IPRs in Agriculture (1961-2018). *The Journal of Development Studies* 57:4, 650-668. [\[Crossref\]](#)
170. Shiyu Bo, Liuchun Deng, Yufeng Sun, Boqun Wang. 2021. Intergovernmental communication under decentralization. *Journal of Economic Behavior & Organization* 184, 606-652. [\[Crossref\]](#)

171. Maximiliano Dvorkin, Juan M. Sánchez, Horacio Sapriza, Emircan Yurdagul. 2021. Sovereign Debt Restructurings. *American Economic Journal: Macroeconomics* **13**:2, 26-77. [[Abstract](#)] [[View PDF article](#)] [[PDF with links](#)]
172. Gregor Semieniuk, Lance Taylor, Armon Rezai, Duncan K. Foley. 2021. Plausible energy demand patterns in a growing global economy with climate policy. *Nature Climate Change* **11**:4, 313-318. [[Crossref](#)]
173. Jianchun Fang, Giray Gozgor, Cheng Yan. 2021. Does globalisation alleviate polarisation?. *The World Economy* **44**:4, 1031-1052. [[Crossref](#)]
174. Evan W. Anderson, William Brock. 2021. Logarithmic Depreciation. *Economic Modelling* **51**, 105503. [[Crossref](#)]
175. Jianjun Miao, Pengfei Wang, Jing Zhou. 2021. Asset bubbles and foreign interest rate shocks. *Review of Economic Dynamics* **72**. . [[Crossref](#)]
176. Marinko Skare, Domingo Riberio Soriano. 2021. How globalization is changing digital technology adoption: An international perspective. *Journal of Innovation & Knowledge* **97**. . [[Crossref](#)]
177. Tiago Loncan. 2021. The Effects of Project Scale on FDI Location Choices: Evidence from Emerging Economies. *Management International Review* **61**:2, 157-205. [[Crossref](#)]
178. Elizavetta Dorinet, Pierre-André Jouvét, Julien Wolfersberger. 2021. Is the agricultural sector cursed too? Evidence from Sub-Saharan Africa. *World Development* **140**, 105250. [[Crossref](#)]
179. Elizabeth M. King, Hannah L. Randolph, Maria S. Floro, Jooyeoun Suh. 2021. Demographic, health, and economic transitions and the future care burden. *World Development* **140**, 105371. [[Crossref](#)]
180. Matthew Lange, Tay Jeong, Emre Amasyali. 2021. The colonial origins of ethnic warfare: Re-examining the impact of communalizing colonial policies in the British and French Empires. *International Journal of Comparative Sociology* **62**:2, 141-165. [[Crossref](#)]
181. Mariana Saenz, Diego Alvarez, Gregory Brock. 2021. Lessons from long-run (1975–2017) structural change in Colombia's coffee production. *Agricultural and Resource Economics Review* **10**, 1-25. [[Crossref](#)]
182. Duygu YOLCU KARADAM, Erdal ÖZMEN. 2021. Real Exchange Rates and Growth: Contractionary Depreciations or Appreciations?. *Ege Akademik Bakis (Ege Academic Review)* 111-123. [[Crossref](#)]
183. Kijin Kim, Junkyu Lee, Manuel Leonard Albis, Ricardo III B. Ang. 2021. Benefits and Spillover Effects of Infrastructure: A Spatial Econometric Approach. *East Asian Economic Review* **25**:1, 3-31. [[Crossref](#)]
184. Jason Hickel, Dylan Sullivan, Huzaifa Zoomkawala. 2021. Plunder in the Post-Colonial Era: Quantifying Drain from the Global South Through Unequal Exchange, 1960–2018. *New Political Economy* **20**, 1-18. [[Crossref](#)]
185. Douglas Gollin, Casper Worm Hansen, Asger Wingender. 2021. Two Blades of Grass: The Impact of the Green Revolution. *Journal of Political Economy* . [[Crossref](#)]
186. Monica Duffy Toft. 2021. Getting Religion Right in Civil Wars. *Journal of Conflict Resolution* **13**, 002200272199789. [[Crossref](#)]
187. Mushtaq Ahmad Malik, Tariq Masood. 2021. Dynamics of Output Growth and Convergence in the Middle East and North African Countries: Heterogeneous Panel ARDL Approach. *Journal of the Knowledge Economy* **35**. . [[Crossref](#)]
188. Zhibai Zhang, Zhicun Bian, Minghua Zhan. 2021. Is absolute purchasing power parity special for Spain?. *Empirical Economics* **27**. . [[Crossref](#)]

189. Sedat Alatas. 2021. Income and factor substitution: an investigation on the Solow growth model under the constant elasticity of substitution. *Journal of Economic Studies* ahead-of-print:ahead-of-print. . [[Crossref](#)]
190. Morteza Moallemi, Daniel Melser, Xiaoyan Chen, Ashton De Silva. 2021. The Globalization of Local Housing Markets: Immigrants, the Motherland and Housing Prices in Australia. *The Journal of Real Estate Finance and Economics* 44. . [[Crossref](#)]
191. Yu. V. Simachev, M. G. Kuzyk, A. A. Fedyunina, A. A. Zaytsev, M. A. Yurevich. 2021. Labor productivity in the non-resource sectors of the Russian economy: What determines firm-level growth?. *Voprosy Ekonomiki* :3, 31-67. [[Crossref](#)]
192. Marie-Eve Bélanger, Frank Schimmelfennig. 2021. Politicization and rebordering in EU enlargement: membership discourses in European parliaments. *Journal of European Public Policy* 28:3, 407-426. [[Crossref](#)]
193. Imran Arif. 2021. Productive knowledge, economic sophistication, and labor share. *World Development* 139, 105303. [[Crossref](#)]
194. Antonio Francesco Gravina, Matteo Lanzafame. 2021. Finance, globalisation, technology and inequality: Do nonlinearities matter?. *Economic Modelling* 96, 96-110. [[Crossref](#)]
195. Perry Sadorsky. 2021. Wind energy for sustainable development: Driving factors and future outlook. *Journal of Cleaner Production* 289, 125779. [[Crossref](#)]
196. Osama Alhendi, József Tóth, Péter Lengyel, Péter Balogh. 2021. Tolerance, Cultural Diversity and Economic Growth: Evidence from Dynamic Panel Data Analysis. *Economies* 9:1, 20. [[Crossref](#)]
197. Petros E. Ioannatos. 2021. Brexit or Euro for the UK? Evidence from Panel Data. *Comparative Economic Studies* 63:1, 117-138. [[Crossref](#)]
198. Giorgio Calcagnini, Germana Giombini, Giuseppe Travaglini. 2021. The Productivity Gap Among Major European Countries, USA and Japan. *Italian Economic Journal* 7:1, 59-78. [[Crossref](#)]
199. Kevin B. Grier, Robin M. Grier. 2021. The Washington consensus works: Causal effects of reform, 1970-2015. *Journal of Comparative Economics* 49:1, 59-72. [[Crossref](#)]
200. Ingrid Kubin, Thomas O. Zörner. 2021. Credit cycles, human capital and the distribution of income. *Journal of Economic Behavior & Organization* 183, 954-975. [[Crossref](#)]
201. Roman Matousek, Nickolaos G. Tzeremes. 2021. The asymmetric impact of human capital on economic growth. *Empirical Economics* 60:3, 1309-1334. [[Crossref](#)]
202. CHRISTEL KOOP, CHRISTINE REH, EDOARDO BRESSANELLI. 2021. Agenda-setting under pressure: Does domestic politics influence the European Commission?. *European Journal of Political Research* 26. . [[Crossref](#)]
203. Justin Yifu Lin, Wei Wang, Venite Zhaoyang Xu. 2021. Catch-up industrial policy and economic transition in China. *The World Economy* 44:3, 602-632. [[Crossref](#)]
204. John Devereux. 2021. THE ABSOLUTION OF HISTORY: CUBAN LIVING STANDARDS AFTER 60 YEARS OF REVOLUTIONARY RULE. *Revista de Historia Económica / Journal of Iberian and Latin American Economic History* 39:1, 5-36. [[Crossref](#)]
205. Martin Mosler. 2021. Autocrats in the United Nations General Assembly: A test of the decoy voting hypothesis. *European Journal of Political Economy* 67, 101973. [[Crossref](#)]
206. Marina Dodlova, Viola Lucas. 2021. Regime security and taxation in autocracies: Who is taxed and how?. *European Journal of Political Economy* 67, 101998. [[Crossref](#)]
207. Rania S. Miniesy, Mariam AbdelKarim. 2021. Generalized Trust and Economic Growth: The Nexus in MENA Countries. *Economies* 9:1, 39. [[Crossref](#)]



208. Sanela Omerovic, Herwig Friedl, Bettina Grün. 2021. Modelling Multiple Regimes in Economic Growth by Mixtures of Generalised Nonlinear Models. *Econometrics and Statistics* 23. . [\[Crossref\]](#)
209. S. Borağan Aruoba. 2021. Institutions, tax evasion, and optimal policy. *Journal of Monetary Economics* 118, 212-229. [\[Crossref\]](#)
210. Federico Belotti, Edoardo Di Porto, Gianluca Santoni. 2021. The effect of local taxes on firm performance: Evidence from geo-referenced data. *Journal of Regional Science* 61:2, 492-510. [\[Crossref\]](#)
211. Michael L. Polemis, Thanasis Stengos, Panayiotis Tzeremes, Nickolaos G. Tzeremes. 2021. Quantile eco-efficiency estimation and convergence: A nonparametric frontier approach. *Economics Letters* 55, 109813. [\[Crossref\]](#)
212. Bruno Ćorić. 2021. Economic Disasters: A New Data Set. *Finance Research Letters* 39, 101612. [\[Crossref\]](#)
213. Jaana Korhonen, Prakash Nepal, Jeffrey P. Prestemon, Frederick W. Cubbage. 2021. Projecting global and regional outlooks for planted forests under the shared socio-economic pathways. *New Forests* 52:2, 197-216. [\[Crossref\]](#)
214. Gharehgozli Orkideh, Atal Vidya. 2021. A Simple Measure to Study Multinational Income Inequality. *Review of Economic Perspectives* 21:1, 27-40. [\[Crossref\]](#)
215. Roman Stöllinger. 2021. Testing the Smile Curve: Functional Specialisation and Value Creation in GVCs. *Structural Change and Economic Dynamics* 56, 93-116. [\[Crossref\]](#)
216. Leandro Prados de la Escosura, Tamás Vonyó, Ilya B. Voskoboynikov. 2021. ACCOUNTING FOR GROWTH IN HISTORY. *Journal of Economic Surveys* 46. . [\[Crossref\]](#)
217. Şeyma YILMAZ KUŞÇUOĞLU, Ergin UZGOREN. 2021. Türkiye’de Ticari Açıklık ve Ekonomik Büyüme İlişkisinin Cobb-Douglas Üretim Fonksiyonu Çerçevesinde Analizi. *Dumlupınar Üniversitesi Sosyal Bilimler Dergisi* . [\[Crossref\]](#)
218. Celsa M.D.C. Machado, António F.M.G. Saraiva, Paulo D.D. Vieira. 2021. Finance-growth nexus in sub-Saharan Africa. *South African Journal of Economic and management Sciences* 24:1. . [\[Crossref\]](#)
219. Firat Demir, Arslan Razmi. 2021. THE REAL EXCHANGE RATE AND DEVELOPMENT THEORY, EVIDENCE, ISSUES AND CHALLENGES. *Journal of Economic Surveys* 56. . [\[Crossref\]](#)
220. Diana Panke, Sören Stapel. 2021. Architects of regional regime complexity: states and regional organizations in Europe. *Journal of Contemporary European Studies* 49, 1-18. [\[Crossref\]](#)
221. Charles Gottlieb, Jan Grobovšek, Markus Poschke, Fernando Saltiel. 2021. Lockdown Accounting. *The B.E. Journal of Macroeconomics*, ahead of print. [\[Crossref\]](#)
222. Piotr Lis, Michael Spagat, Uih Ran Lee. 2021. Civilian targeting in African conflicts: A poor actor’s game that spreads through space. *Journal of Peace Research* 3, 002234332096115. [\[Crossref\]](#)
223. Alex Coad, Gianluca Biggi, Elisa Giuliani. 2021. Asbestos, leaded petrol, and other aberrations: comparing countries’ regulatory responses to disapproved products and technologies. *Industry and Innovation* 28:2, 201-233. [\[Crossref\]](#)
224. Jonas Vestby, Halvard Buhaug, Nina von Uexkull. 2021. Why do some poor countries see armed conflict while others do not? A dual sector approach. *World Development* 138, 105273. [\[Crossref\]](#)
225. Samuel Verevis, Murat Üngör. 2021. What has New Zealand gained from The FTA with China?: Two counterfactual analyses †. *Scottish Journal of Political Economy* 68:1, 20-50. [\[Crossref\]](#)
226. Li-Ju Chen. 2021. Female policymakers and educational expenditures: cross-country evidence. *European Journal of Law and Economics* 51:1, 129-155. [\[Crossref\]](#)
227. Hanol Lee, Jong-Wha Lee. 2021. Patterns and determinants of intergenerational educational mobility: Evidence across countries. *Pacific Economic Review* 26:1, 70-90. [\[Crossref\]](#)

228. Jonathan J. Adams, Philip Barrett. 2021. Why are countries' asset portfolios exposed to nominal exchange rates?. *Journal of International Money and Finance* **110**, 102277. [[Crossref](#)]
229. Bahareh Oryani, Yoonmo Koo, Shahabaldin Rezania, Afsaneh Shafiee. 2021. Investigating the asymmetric impact of energy consumption on reshaping future energy policy and economic growth in Iran using extended Cobb-Douglas production function. *Energy* **216**, 119187. [[Crossref](#)]
230. Ugur Korkut Pata, Abdullah Emre Caglar. 2021. Investigating the EKC hypothesis with renewable energy consumption, human capital, globalization and trade openness for China: Evidence from augmented ARDL approach with a structural break. *Energy* **216**, 119220. [[Crossref](#)]
231. Muhammad Shakeel. 2021. Analyses of energy-GDP-export nexus: The way-forward. *Energy* **216**, 119280. [[Crossref](#)]
232. Zheng Fang, Marcin Wolski. 2021. Human capital, energy and economic growth in China: evidence from multivariate nonlinear Granger causality tests. *Empirical Economics* **60**:2, 607-632. [[Crossref](#)]
233. Karen Jackson, Oleksandr Shepotylo. 2021. Belt and road: The China dream?. *China Economic Review* **41**, 101604. [[Crossref](#)]
234. Sèna Kimm Gnanon. 2021. Development aid and services export diversification. *International Journal of Economic Policy Studies* **15**:1, 125-156. [[Crossref](#)]
235. Akio Konno, Hironori Kato, Wataru Takeuchi, Riku Kiguchi. 2021. Global Evidence on Productivity Effects of Road Infrastructure Incorporating Spatial Spillover Effects. *Transport Policy* **93**. . [[Crossref](#)]
236. Alex O. Acheampong, Michael Odei Erdiaw-Kwasie, Matthew Abunyewah. 2021. Does energy accessibility improve human development? Evidence from energy-poor regions. *Energy Economics* **74**, 105165. [[Crossref](#)]
237. Abdullah Al-Mamun, Michael Seamer. 2021. The influence of institutional qualities on CSR engagement: a comparison of developed and developing economies. *Meditari Accountancy Research* **ahead-of-print**:ahead-of-print. . [[Crossref](#)]
238. Ángel Diomar Villalobos Valencia, Leobaldo Enrique Molero Olivo, Alberto Gregorio Castellano. 2021. Análisis de la productividad total de los factores en América del Sur en el período 1950-2014. *Lecturas de Economía* :94, 127-163. [[Crossref](#)]
239. Laurie S. M. Reijnders, Marcel P. Timmer, Xianjia Ye. 2021. Labour demand in global value chains: Is there a bias against unskilled work?. *The World Economy* **79**. . [[Crossref](#)]
240. Bhushan Praveen Jangam, Vaseem Akram. 2021. Does financial integration drive export diversification? Evidence from a cross-country analysis. *Journal of Financial Economic Policy* **13**:1, 45-61. [[Crossref](#)]
241. Jeremy Nguyen, Abbas Valadkhani, Alan Nguyen, Alexandra Wake. 2021. Press Freedom and the Global Economy: The Cost of Slipping Backwards. *Journalism Studies* **1**, 1-19. [[Crossref](#)]
242. Theodore R. Breton. 2021. The role of national culture in student acquisition of mathematics and reading skills. *Compare: A Journal of Comparative and International Education* 1-17. [[Crossref](#)]
243. Leandro Prados de la Escosura. 2021. Capital in Spain, 1850–2019. *Cliometrica* **60**. . [[Crossref](#)]
244. Diogo Baerlocher. 2021. Public employment and economic growth. *Economic Theory* **4**. . [[Crossref](#)]
245. Biplab Kumar Guru, Inder Sekhar Yadav. 2021. Financial Integration in Asia: A Macroeconomic Perspective. *The Developing Economies* **56**. . [[Crossref](#)]
246. Christopher Linebarger. 2021. Preventive medicine: domestic repression and foreign revolutionary states. *Dynamics of Asymmetric Conflict* **14**:1, 3-24. [[Crossref](#)]
247. Francesco Macheda, Roberto Nadalini. 2021. Samir Amin in Beijing: delving into China's delinking policy. *Review of African Political Economy* **48**:167, 119-141. [[Crossref](#)]

248. M. Koray Kalafatçılar, M. Utku Özmen. 2021. Demographic Transition and Inflation in Emerging Economies. *Eastern European Economics* 59:1, 51-69. [[Crossref](#)]
249. Carmelo Petraglia, Gaetano Vecchione. 2021. Long-run pro-trade effects of diasporas: evidence on Italian regions. *Spatial Economic Analysis* 16:1, 47-72. [[Crossref](#)]
250. Jasper Brinkerink, Andrea Chegut, Wilko Letterie. Expansionary Investment Activities: Assessing Equipment and Buildings in Productivity 303-333. [[Crossref](#)]
251. Xiaoqing (Maggie) Fu, Qun Bao, Hongjun Xie, Xiaolan Fu. 2021. Diffusion of industrial robotics and inclusive growth: Labour market evidence from cross country data. *Journal of Business Research* 122, 670-684. [[Crossref](#)]
252. Fabian Gaessler, Bronwyn H. Hall, Dietmar Harhoff. 2021. Should there be lower taxes on patent income?. *Research Policy* 50:1, 104129. [[Crossref](#)]
253. Jared Furuta. 2021. Western Colonialism and World Society in National Education Systems: Global Trends in the Use of High-Stakes Exams at Early Ages, 1960 to 2010. *Sociology of Education* 94:1, 84-101. [[Crossref](#)]
254. Nathaniel P. S. Cook, Jason C. Jones. 2021. The African Growth and Opportunity Act and growth in sub-Saharan Africa: A local projection approach. *The World Economy* 44:1, 234-261. [[Crossref](#)]
255. Madhu Sehrawat. 2021. Modelling the nexus between human capital, income inequality, and energy demand in India: new evidences from asymmetric and non-linear analysis. *Environmental Science and Pollution Research* 28:3, 3632-3643. [[Crossref](#)]
256. Anamika Pandey, Michael Brauer, Maureen L Cropper, Kalpana Balakrishnan, Prashant Mathur, Sagnik Dey, Burak Turkgulu, G Anil Kumar, Mukesh Khare, Gufran Beig, Tarun Gupta, Rinu P Krishnankutty, Kate Causey, Aaron J Cohen, Stuti Bhargava, Ashutosh N Aggarwal, Anurag Agrawal, Shally Awasthi, Fiona Bennitt, Sadhana Bhagwat, P Bhanumati, Katrin Burkart, Joy K Chakma, Thomas C Chiles, Sourangsu Chowdhury, D J Christopher, Subhojit Dey, Samantha Fisher, Barbara Fraumeni, Richard Fuller, Alope G Ghoshal, Mahaveer J Golechha, Prakash C Gupta, Rachita Gupta, Rajeev Gupta, Shreekanth Gupta, Sarath Guttikunda, David Hanrahan, Sivadasanpillai Harikrishnan, Panniyammakal Jeemon, Tushar K Joshi, Rajni Kant, Surya Kant, Tanvir Kaur, Parvaiz A Koul, Praveen Kumar, Rakesh Kumar, Samantha L Larson, Rakesh Lodha, Kishore K Madhipatla, P A Mahesh, Ridhima Malhotra, Shunsuke Managi, Keith Martin, Matthews Mathai, Joseph L Mathew, Ravi Mehrotra, B V Murali Mohan, Viswananthan Mohan, Satinath Mukhopadhyay, Parul Mutreja, Nitish Naik, Sanjeev Nair, Jeyaraj D Pandian, Pallavi Pant, Arokiasamy Perianayagam, Dorairaj Prabhakaran, Poornima Prabhakaran, Goura K Rath, Shamika Ravi, Ambuj Roy, Yogesh D Sabde, Sundeep Salvi, Sankar Sambandam, Bhavay Sharma, Meenakshi Sharma, Shweta Sharma, R S Sharma, Aakash Shrivastava, Sujeet Singh, Virendra Singh, Rodney Smith, Jeffrey D Stanaway, Gabrielle Taghian, Nikhil Tandon, J S Thakur, Nihal J Thomas, G S Toteja, Chris M Varghese, Chandra Venkataraman, Krishnan N Venugopal, Katherine D Walker, Alexandria Y Watson, Sarah Wozniak, Denis Xavier, Gautam N Yadama, Geetika Yadav, D K Shukla, Hendrik J Bekedam, K Srinath Reddy, Randeep Guleria, Theo Vos, Stephen S Lim, Rakhi Dandona, Sunil Kumar, Pushpam Kumar, Philip J Landrigan, Lalit Dandona. 2021. Health and economic impact of air pollution in the states of India: the Global Burden of Disease Study 2019. *The Lancet Planetary Health* 5:1, e25-e38. [[Crossref](#)]
257. Philipp Koch. 2021. Economic complexity and growth: Can value-added exports better explain the link?. *Economics Letters* 198, 109682. [[Crossref](#)]
258. Sabrina Auci, Laura Castellucci, Manuela Coromaldi. 2021. How does public spending affect technical efficiency? Some evidence from 15 European countries. *Bulletin of Economic Research* 73:1, 108-130. [[Crossref](#)]
259. Jin-Li Hu, Satoshi Honma, Yu-Kai Chen. 2021. Total-Factor Energy and Emission Efficiencies of ASEAN and Other Asian Economies. *Asian Economic Policy Review* 16:1, 92-112. [[Crossref](#)]

260. Johannes Seiler, Kenneth Harttgen, Thomas Kneib, Stefan Lang. 2021. Modelling children's anthropometric status using Bayesian distributional regression merging socio-economic and remote sensed data from South Asia and sub-Saharan Africa. *Economics & Human Biology* **40**, 100950. [[Crossref](#)]
261. Lionel Fontagné, Gianluca Santoni. 2021. GVCs and the Endogenous Geography of RTAs. *European Economic Review* 103656. [[Crossref](#)]
262. Qingqing Cao, Raoul Minetti, María Pía Olivero, Giacomo Romanini. 2021. Recessions and recoveries: Multinational banks in the business cycle. *Journal of Monetary Economics* **117**, 203-219. [[Crossref](#)]
263. Rafael Alvarado, Brayan Tillaguango, Michelle López-Sánchez, Pablo Ponce, Cem Işık. 2021. Heterogeneous impact of natural resources on income inequality: The role of the shadow economy and human capital index. *Economic Analysis and Policy* **61**. . [[Crossref](#)]
264. Rainer Kotschy, Uwe Sunde. 2021. Income Shocks, Inequality, and Democracy\*. *The Scandinavian Journal of Economics* **123**:1, 295-326. [[Crossref](#)]
265. Ronald C. Inglehart, Ryan Nash, Quais N. Hassan, Judith Schwartzbaum. 2021. Attitudes towards Euthanasia: A Longitudinal Analysis of the Role of Economic, Cultural, and Health-related Factors. *Journal of Pain and Symptom Management* **10**. . [[Crossref](#)]
266. Johannes Gütschow, M. Louise Jeffery, Annika Günther, Malte Meinshausen. 2021. Country-resolved combined emission and socio-economic pathways based on the Representative Concentration Pathway (RCP) and Shared Socio-Economic Pathway (SSP) scenarios. *Earth System Science Data* **13**:3, 1005-1040. [[Crossref](#)]
267. Danko Tarabar, Andrew T. Young. 2021. What constitutes a constitutional amendment culture?. *European Journal of Political Economy* **66**, 101953. [[Crossref](#)]
268. Nicolai Schulz, Tim Kelsall. 2021. The Political Settlements Dataset: An Introduction With Illustrative Applications. *SSRN Electronic Journal* **115**. . [[Crossref](#)]
269. Jan Teorell, Staffan Kumlin, Aksel Sundström, Sören Holmberg, Bo Rothstein, Natalia Alvarado Pachon, Cem Mert Dalli. 2021. The Quality of Government OECD Dataset, version Jan21. *SSRN Electronic Journal* . [[Crossref](#)]
270. Jan Teorell, Aksel Sundström, Sören Holmberg, Bo Rothstein, Natalia Alvarado Pachon, Cem Mert Dalli. 2021. The Quality of Government Standard Dataset, version Jan21. *SSRN Electronic Journal* **25**. . [[Crossref](#)]
271. Felicitas Eckebrecht. 2021. Much ado about nothing? The controversy about the International Telecommunication Regulations and Internet Governance. *SSRN Electronic Journal* . [[Crossref](#)]
272. Joseph P. Joyce. 2021. The International Distribution of FDI Income And Its Impact on Income Inequality. *SSRN Electronic Journal* . [[Crossref](#)]
273. Ioannis Bournakis, Marian Rizov, Dimitris Christopoulos. 2021. Revisiting the Economic Performance and Institutions Debate in SSA Countries: The Role of Legal Origins in the Context of Ethnic Heterogeneity. *SSRN Electronic Journal* **1**. . [[Crossref](#)]
274. Anna Lo Prete. 2021. Financial literacy, education, and voter turnout. *SSRN Electronic Journal* . [[Crossref](#)]
275. Richard S. J. Tol. 2021. The Economic Impact of Weather and Climate. *SSRN Electronic Journal* . [[Crossref](#)]
276. Adilson Giovanini. 2021. Mudança estrutural e serviços intermediários: algumas evidências para o limiar do século XXI. *Economia e Sociedade* **30**:1, 63-90. [[Crossref](#)]

277. Yineng Rong, X. San Liang. 2021. Panel Data Causal Inference Using a Rigorous Information Flow Analysis for Homogeneous, Independent and Identically Distributed Datasets. *IEEE Access* **9**, 47266-47274. [[Crossref](#)]
278. Paolo Maranzano, Joao Paulo Cerdeira Bento, Matteo Manera. 2021. The Role of Education and Income Inequality on Environmental Quality. A Panel Data Analysis of the EKC Hypothesis on OECD Countries. *SSRN Electronic Journal* **35**. . [[Crossref](#)]
279. Christian William Callaghan. 2021. Consequences of deindustrialisation for globalisation: Insights for international business. *International Business Review* **28**, 101804. [[Crossref](#)]
280. João Paulo Cerdeira Bento. Renewable energy-based power generation and the contribution to economic growth: the case of Portugal 587-607. [[Crossref](#)]
281. SUNTERA GHATAK. 2021. Convergence Potentials in SAARC and ASEAN Economies. *The Journal of Indian and Asian Studies* **02:01**, 2150004. [[Crossref](#)]
282. Nguyen Phuc Canh, Su Dinh Thanh, Dang Thi Bach Van, Nguyen Quang Binh. Does Energy Security Affect Institutional Quality? Empirical Evidence from Emerging Economies 335-377. [[Crossref](#)]
283. Carey W. King. Scenarios and Trends of the Future 413-440. [[Crossref](#)]
284. António Mendonça, Sofia Vale. Europe at the Crossroads of the COVID-19 Crisis: Integrated Macroeconomic Policy Solutions for an Asymmetric Area 45-67. [[Crossref](#)]
285. Stefanos Ioannou, Dariusz Wójcik. 2021. Finance, Globalization, and Urban Primacy. *Economic Geography* **97:1**, 34-65. [[Crossref](#)]
286. Andrzej Cieřlik, Aleksandra Parteka. 2021. Relative Productivity, Country Size and Export Diversification. *Structural Change and Economic Dynamics* **117**. . [[Crossref](#)]
287. Ousama Ben-Salha, Mourad Zmami. 2021. The Effect of Economic Growth on Employment in GCC Countries. *Scientific Annals of Economics and Business* **68:1**, 25-41. [[Crossref](#)]
288. Dmitry Valerievich Didenko, Natalia Vladimirovna Grineva. 2021. Soviet Economic Growth through the Interstate Prism: the Role of Research Funding. *Историческая информатика* :1, 48-65. [[Crossref](#)]
289. Jorge Mauricio Falc3n G3mez, Fernando Mart3n Mayoral. Economic Complexity and Trade Diversification in the Western Hemisphere Between 1962 and 2017 115-147. [[Crossref](#)]
290. Alena Dorakh. 2021. FDI determinants in Europe and Chinese influence. *Serbian Journal of Management* **16:1**, 21-37. [[Crossref](#)]
291. Nargess Golshan, Inder Khurana, Felipe Bastos G. Silva. 2021. Reporting Transparency and Labor Market Outcomes. *SSRN Electronic Journal* **110**. . [[Crossref](#)]
292. Glenn-Marie Lange, Shun Chonabayashi, Kenan Karak3lah, Esther Naikal. The Impact of Air Pollution on Human Capital Wealth 1-38. [[Crossref](#)]
293. Gang Liu, Barbara M. Fraumeni. Introduction ix-xix. [[Crossref](#)]
294. Thanh Cong Nguyen. 2021. Financial crises and income inequality. *SSRN Electronic Journal* **29**. . [[Crossref](#)]
295. Markus Brueckner. 2021. Fiscal consolidations. *SSRN Electronic Journal* **98**. . [[Crossref](#)]
296. Kirill Rostislav, Aleksandr Ponomarev. 2021. СОВОКУПНАЯ ФАКТОРНАЯ ПРОИЗВОДИТЕЛЬНОСТЬ В РОССИИ: ВЛИЯНИЕ ЭКОНОМИКО-ГЕОГРАФИЧЕСКИХ УСЛОВИЙ И ЧЕЛОВЕЧЕСКОГО КАПИТАЛА (Total Factor Productivity in Russia: The Impact of Economic and Geographical Conditions and Human Capital). *SSRN Electronic Journal* **6**. . [[Crossref](#)]
297. Nathaniel Lane. 2021. Manufacturing Revolutions: Industrial Policy and Industrialization in South Korea. *SSRN Electronic Journal* **84**. . [[Crossref](#)]

298. Karsten Müller, Emil Verner. 2021. Credit Allocation and Macroeconomic Fluctuations. *SSRN Electronic Journal* **115**. . [[Crossref](#)]
299. Ali Gökhan YÜCEL. 2020. KONJONKTÜR DALGALARININ BELİRLEYİCİLERİ: G7 VE E7 ÜLKELERİ ÜZERİNE KARŞILAŞTIRMALI BİR ANALİZ. *International Journal of Management Economics and Business* **16**:4. . [[Crossref](#)]
300. Verónica Cerezo García, Heri Oscar Landa Díaz. 2020. CRECIMIENTO ECONÓMICO Y DESIGUALDAD EN ASIA, EUROPA Y AMÉRICA LATINA, 1990-2019. *Investigación Económica* **80**:315, 59. [[Crossref](#)]
301. Peyman Hekmatpour. 2020. Right-Wing Stewards: The Promoting Effect of Religiosity on Environmental Concern among Political Conservatives in a Global Context. *Social Problems* **52**. . [[Crossref](#)]
302. Leandro Prados de la Escosura, Joan R. Rosés. 2020. ACCOUNTING FOR GROWTH: SPAIN, 1850–2019. *Journal of Economic Surveys* **24**. . [[Crossref](#)]
303. Phornchanok Cumperayot, Roy Kouwenberg. 2020. Cheaper Currencies and Long-Term Growth: The Effect of Exchange Rate Management and Capital Controls. *The World Economy* . [[Crossref](#)]
304. Hazwan Haini. 2020. Tourism, Internet penetration and economic growth. *Journal of Policy Research in Tourism, Leisure and Events* 1-7. [[Crossref](#)]
305. Wei Jin, Yixiao Zhou. 2020. GROWTH AND CONVERGENCE THROUGH TECHNOLOGICAL INTERDEPENDENCE. *Macroeconomic Dynamics* **10**, 1-37. [[Crossref](#)]
306. Martin Rapetti. 2020. The Real Exchange Rate and Economic Growth: A Survey. *Journal of Globalization and Development* **11**:2. . [[Crossref](#)]
307. Nguyen Phuc Canh, Su Dinh Thanh. 2020. The Dynamics of Export Diversification, Economic Complexity and Economic Growth Cycles: Global Evidence. *Foreign Trade Review* **3**, 001573252097044. [[Crossref](#)]
308. Matthew Hauenstein, Madhav Joshi. 2020. Remaining Seized of the Matter: UN Resolutions and Peace Implementation. *International Studies Quarterly* **64**:4, 834-844. [[Crossref](#)]
309. Daša FarC̣nik, Tanja IsteniC̣. The Importance of Human Capital for Sustainability 237-252. [[Crossref](#)]
310. Daniel Melser, Michael Webster. 2020. Multilateral Methods, Substitution Bias, and Chain Drift: Some Empirical Comparisons. *Review of Income and Wealth* **22**. . [[Crossref](#)]
311. Xufang Zhang, Changyou Sun, Jason Gordon, Cheng Li, Ian A Munn. 2020. Antidumping Duty Investigations and Decisions in the Global Forest Products Industry. *Forest Science* **66**:6, 666-677. [[Crossref](#)]
312. Guillermo Beylis, Roberto Fattal Jaef, Michael Morris, Ashwini Rekha Sebastian, Rishabh Sinha. What is structural transformation? 7-24. [[Crossref](#)]
313. Johannes Lohwasser, Axel Schaffer, Andreas Brieden. 2020. The role of demographic and economic drivers on the environment in traditional and standardized STIRPAT analysis. *Ecological Economics* **178**, 106811. [[Crossref](#)]
314. THW Ziesemer. 2020. Japan's Productivity and GDP Growth: The Role of Private, Public and Foreign R&D 1967–2017. *Economies* **8**:4, 77. [[Crossref](#)]
315. Fabio Monteforte, Jonathan R. W. Temple. 2020. The autocratic gamble: evidence from robust variance tests. *Economics of Governance* **21**:4, 363-384. [[Crossref](#)]
316. XIAOSHAN HU, GUANGHUA WAN, JING WANG. 2020. THE IMPACTS OF GLOBALIZATION ON THE LABOR SHARE: EVIDENCE FROM ASIA. *The Singapore Economic Review* **65**:supp01, 57-73. [[Crossref](#)]



317. Nicolas Clootens, Djamel Kirat. 2020. Threshold regressions for the resource curse. *Environment and Development Economics* 25:6, 583-610. [[Crossref](#)]
318. Susanne Mueller-Using, Wieslaw Urban, Jan Wedemeier. 2020. Internationalization of SMEs in the Baltic Sea Region: Barriers of cross-national collaboration considering regional innovation strategies for smart specialization. *Growth and Change* 51:4, 1471-1490. [[Crossref](#)]
319. Cristiano Antonelli, Matteo Tubiana. 2020. Income inequality in the knowledge economy. *Structural Change and Economic Dynamics* 55, 153-164. [[Crossref](#)]
320. Canh Phuc Nguyen, Thanh Dinh Su, Nadia Doytch. 2020. The drivers of financial development: Global evidence from internet and mobile usage. *Information Economics and Policy* 53, 100892. [[Crossref](#)]
321. Sokchea Lim. 2020. Policy to promote overseas migrant work: A macro-dynamic framework. *Mathematical Social Sciences* . [[Crossref](#)]
322. Mushtaq Ahmad Malik, Tariq Masood. 2020. Analysis of Growth Accounting and Convergence in MENA Countries: Panel Cointegration Approach. *South Asian Journal of Macroeconomics and Public Finance* 9:2, 237-262. [[Crossref](#)]
323. Michael Dunford, Bing Qi. 2020. Global reset: COVID-19, systemic rivalry and the global order. *Research in Globalization* 2, 100021. [[Crossref](#)]
324. Marco Hafner, Erez Yerushalmi, Martin Stepanek, William Phillips, Jack Pollard, Advait Deshpande, Michael Whitmore, Francois Millard, Shaun Subel, Christian van Stolk. 2020. Estimating the global economic benefits of physically active populations over 30 years (2020–2050). *British Journal of Sports Medicine* 54:24, 1482-1487. [[Crossref](#)]
325. Emmanuel Aramendia, Paul E. Brockway, Massimo Pizzol, Matthew K. Heun. 2020. Moving from final to useful stage in energy-economy analysis: A critical assessment. *Applied Energy* 116194. [[Crossref](#)]
326. Vassilis Tselios, Emma L. Tompkins. 2020. Can we prevent disasters using socioeconomic and political policy tools?. *International Journal of Disaster Risk Reduction* 51, 101764. [[Crossref](#)]
327. Rok Spruk, Mitja Kovac. 2020. Does a ban on trans fats improve public health: synthetic control evidence from Denmark. *Swiss Journal of Economics and Statistics* 156:1. . [[Crossref](#)]
328. Md Arif-Ur-Rahman, Kazuo Inaba. 2020. Financial integration and total factor productivity: in consideration of different capital controls and foreign direct investment. *Journal of Economic Structures* 9:1. . [[Crossref](#)]
329. Mohamed Saadi. 2020. Remittance Inflows and Export Complexity: New Evidence from Developing and Emerging Countries. *The Journal of Development Studies* 56:12, 2266-2292. [[Crossref](#)]
330. Hiroyuki Imai. 2020. Was the Balassa–Samuelson Effect Small? Uncaptured Quality Improvements and Japan's Real Exchange Rate Appreciation, 1956–1970. *Comparative Economic Studies* 62:4, 632-660. [[Crossref](#)]
331. Fisayo Fagbemi, Tolulope Temilola Osinubi. 2020. Leveraging foreign direct investment for sustainability: An approach to sustainable human development in Nigeria. *Resources, Environment and Sustainability* 2, 100005. [[Crossref](#)]
332. Murat Ozbilgin. 2020. Gains from Reducing the Implementation Delays in Public Investment. *IMF Economic Review* 68:4, 815-847. [[Crossref](#)]
333. Sahar Amidi, Ali Fagheh Majidi, Bakhtiar Javaheri. 2020. Growth spillover: a spatial dynamic panel data and spatial cross section data approaches in selected Asian countries. *Future Business Journal* 6:1. . [[Crossref](#)]
334. Tam Nguyen Huu, Deniz Dilan Karaman Örsal. 2020. A new and benign hegemon on the horizon? The Chinese century and growth in the Global South. *Economics* 14:1. . [[Crossref](#)]

335. Andrea Sáenz de Viteri Vázquez, Christian Bjørnskov. 2020. Constitutional power concentration and corruption: evidence from Latin America and the Caribbean. *Constitutional Political Economy* 31:4, 509-536. [[Crossref](#)]
336. Colin O'Reilly. 2020. Violent conflict and institutional change\*. *Economics of Transition and Institutional Change* 47. . [[Crossref](#)]
337. John Brolin, Astrid Kander. 2020. Global trade in the Anthropocene: A review of trends and direction of environmental factor flows during the Great Acceleration. *The Anthropocene Review* 3, 205301962097371. [[Crossref](#)]
338. Shuiting Wu. 2020. Effects of Pandemics-Related Uncertainty on Household Consumption: Evidence From the Cross-Country Data. *Frontiers in Public Health* 8. . [[Crossref](#)]
339. Syed Rashid Munir. 2020. The Opposition Advantage: Islamist Opposition Parties and Security Cooperation. *Politics and Religion* 50, 1-25. [[Crossref](#)]
340. Fatma Taşdemir. 2020. Endogenous thresholds for the determinants of FDI inflows: evidence from the MENA countries. *International Journal of Emerging Markets* ahead-of-print:ahead-of-print. . [[Crossref](#)]
341. David Waldner, Benjamin Smith. 2020. Survivorship Bias in Comparative Politics: Endogenous Sovereignty and the Resource Curse. *Perspectives on Politics* 1.7, 1-16. [[Crossref](#)]
342. Takayuki Sakamoto. 2020. Social Investment Policy, Economic Growth, and Welfare States: Channels of Pro-Growth Effects of Policy. *Social Forces* 99:2, 590-615. [[Crossref](#)]
343. Otto Brøns-Petersen, Søren Havn Gjedsted. 2020. Climate change and institutional change: what is the relative importance for economic performance?. *Environmental Economics and Policy Studies* 91. . [[Crossref](#)]
344. SCOTT F. ABRAMSON, SERGIO MONTERO. 2020. Learning about Growth and Democracy. *American Political Science Review* 114:4, 1195-1212. [[Crossref](#)]
345. Eric Kemp-Benedict. 2020. Convergence of actual, warranted, and natural growth rates in a Kaleckian-Harrodian-classical model. *Metroeconomica* 71:4, 851-881. [[Crossref](#)]
346. Ozan Ekin Kurt. 2020. Functional income distribution, capacity utilization, capital accumulation and productivity growth in Turkey: A post-Kaleckian analysis. *Metroeconomica* 71:4, 734-766. [[Crossref](#)]
347. Stephanie T Waldhoff, Ian Sue Wing, James Edmonds, Guoyong Leng, Xuesong Zhang. 2020. Future climate impacts on global agricultural yields over the 21st century. *Environmental Research Letters* 15:11, 114010. [[Crossref](#)]
348. Oasis Kodila-Tedika, Sherif Khalifa. 2020. Long-term vision and economic development. *The World Economy* 43:11, 3088-3102. [[Crossref](#)]
349. Haluk Yener, Barış Soybilgen, Thanasis Stengos. 2020. A general model for financial crises: An application to eurozone crisis. *International Review of Economics & Finance* 70, 202-229. [[Crossref](#)]
350. Jens J. Krüger. 2020. Long-run productivity trends: A global update with a global index. *Review of Development Economics* 24:4, 1393-1412. [[Crossref](#)]
351. Neha Bairoliya, Ray Miller. 2020. Social insurance, demographics, and rural-urban migration in China. *Regional Science and Urban Economics* 103615. [[Crossref](#)]
352. Aleksandra Parteka. 2020. What drives cross-country differences in export variety? A bilateral panel approach. *Economic Modelling* 92, 48-56. [[Crossref](#)]
353. Hazwan Haini. 2020. Examining the relationship between finance, institutions and economic growth: evidence from the ASEAN economies. *Economic Change and Restructuring* 53:4, 519-542. [[Crossref](#)]
354. Lewis Dijkstra, Aneta J. Florczyk, Sergio Freire, Thomas Kemper, Michele Melchiorri, Martino Pesaresi, Marcello Schiavina. 2020. Applying the Degree of Urbanisation to the globe: A new

- harmonised definition reveals a different picture of global urbanisation. *Journal of Urban Economics* 103:12. [[Crossref](#)]
355. Nguyen Phuc Canh, Christophe Schinckus, Su Dinh Thanh, Felicia Chong Hui Ling. 2020. Effects of the internet, mobile, and land phones on income inequality and The Kuznets curve: Cross country analysis. *Telecommunications Policy* 44:10, 102041. [[Crossref](#)]
  356. Doron Ella. 2020. Categorization in international organizations. *International Interactions* 46:6, 987-1015. [[Crossref](#)]
  357. Guzmán Ourens. 2020. The long-term impact of trade with firm heterogeneity. *Review of World Economics* 156:4, 887-919. [[Crossref](#)]
  358. Zübeyde ŞENTÜRK ULUCAK, Faik BİLGİLİ. 2020. Economic Analysis of Crime: An Application on Turkey and European Countries. *Sosyoekonomi* 349-370. [[Crossref](#)]
  359. Idris Abdullahi Abdulqadir. 2020. The nonlinearity of exchange rate pass-through on currency invoice: A quantile, generalized method of moments and threshold effect-test from sub-Sahara African economies. *International Journal of Finance & Economics* 15. . [[Crossref](#)]
  360. Guanghua Wan, Chen Wang, Xun Zhang. 2020. The Poverty-Growth-Inequality Triangle: Asia 1960s to 2010s. *Social Indicators Research* 109. . [[Crossref](#)]
  361. Toni Juuti. 2020. Integrated capital shares. *Applied Economics Letters* 27:18, 1533-1540. [[Crossref](#)]
  362. Tobias Tober, Marius R. Busemeyer. 2020. Breaking the link? How European integration shapes social policy demand and supply. *Journal of European Public Policy* 13, 1-22. [[Crossref](#)]
  363. Rainer Kotschy, Patricio Suarez Urtaza, Uwe Sunde. 2020. The demographic dividend is more than an education dividend. *Proceedings of the National Academy of Sciences* 117:42, 25982-25984. [[Crossref](#)]
  364. Rajiv Banker, Rong Huang, Yinghua Li, Sha Zhao. 2020. Do Accounting Standards Matter for Productivity?. *Production and Operations Management* 68. . [[Crossref](#)]
  365. Ana F Ortigoza, José A Tapia Granados, J Jaime Miranda, Marcio Alazraqui, Diana Higuera, Georgina Villamonte, Amélia Augusta de Lima Friche, Tonatiuh Barrientos Gutierrez, Ana V Diez Roux. 2020. Characterising variability and predictors of infant mortality in urban settings: findings from 286 Latin American cities. *Journal of Epidemiology and Community Health* 24, jech-2020-215137. [[Crossref](#)]
  366. Şeyma YILMAZ KUŞÇUOĞLU, Zeki YILMAZ. 2020. FARKLI GELİR DÜZEYİNDEKİ ÜLKELERDE TİCARİ AÇIKLIK, FİNANSAL GELİŞME VE EKONOMİK BÜYÜME İLİŞKİSİ. *IBAD Sosyal Bilimler Dergisi* . [[Crossref](#)]
  367. Sarah Shair-Rosenfield, Arjan H. Schakel, Sara Niedzwiecki, Gary Marks, Liesbet Hooghe, Sandra Chapman-Osterkat. 2020. Language difference and regional authority. *Regional & Federal Studies* 23, 1-25. [[Crossref](#)]
  368. Nataliia Nazukova. 2020. Public funding of education as a factor of economic growth. *Economy and forecasting* 2020:2, 72-90. [[Crossref](#)]
  369. Singgih Gunarsa, Tony Makin, Nicholas Rohde. 2020. Public debt in developing Asia: a help or hindrance to growth?. *Applied Economics Letters* 27:17, 1400-1403. [[Crossref](#)]
  370. Panayiotis Tzeremes. 2020. How do globalization indicators de jure–de facto and total factor productivity affect tourism development in European countries?. *Journal of Hospitality and Tourism Insights* ahead-of-print:ahead-of-print. . [[Crossref](#)]
  371. Wishnu Mahraddika. 2020. Real exchange rate misalignments in developing countries: The role of exchange rate flexibility and capital account openness. *International Economics* 163, 1-24. [[Crossref](#)]
  372. Huaping Sun, Anthony Kwaku Kporsu, Farhad Taghizadeh-Hesary, Bless Kofi Edziah. 2020. Estimating environmental efficiency and convergence: 1980 to 2016. *Energy* 208, 118224. [[Crossref](#)]

373. Nicola Caravaggio. 2020. A global empirical re-assessment of the Environmental Kuznets curve for deforestation. *Forest Policy and Economics* **119**, 102282. [[Crossref](#)]
374. Erin M. Evans, Evan Schofer, Ann Hironaka. 2020. Globally Visible Environmental Protest: A Cross-national Analysis, 1970–2010. *Sociological Perspectives* **63**:5, 786–808. [[Crossref](#)]
375. Andreas Bergh, Christian Bjørnskov. 2020. DOES BIG GOVERNMENT HURT GROWTH LESS IN HIGH-TRUST COUNTRIES?. *Contemporary Economic Policy* **38**:4, 643–658. [[Crossref](#)]
376. Maxim Pinkovskiy, Xavier Sala-i-Martin. 2020. Shining a Light on Purchasing Power Parities. *American Economic Journal: Macroeconomics* **12**:4, 71–108. [[Abstract](#)] [[View PDF article](#)] [[PDF with links](#)]
377. Christodoulos Stefanadis. 2020. Social conflict, property rights, and the capital–labor split. *Journal of Theoretical Politics* **32**:4, 582–604. [[Crossref](#)]
378. Kai Ding, Filippo Rebelli. 2020. OPTIMAL AGRICULTURAL POLICY: SMALL GAINS?. *Economic Inquiry* **58**:4, 1907–1928. [[Crossref](#)]
379. David E. Bloom, Simiao Chen, Michael Kuhn, Mark E. McGovern, Les Oxley, Klaus Prettnner. 2020. The economic burden of chronic diseases: Estimates and projections for China, Japan, and South Korea. *The Journal of the Economics of Ageing* **17**, 100163. [[Crossref](#)]
380. F. Wu, P. Zhou, D.Q. Zhou. 2020. Modeling carbon emission performance under a new joint production technology with energy input. *Energy Economics* **92**, 104963. [[Crossref](#)]
381. Kerui Du, Ying Yu, Jing Li. 2020. Does international trade promote CO2 emission performance? An empirical analysis based on a partially linear functional-coefficient panel data model. *Energy Economics* **92**, 104983. [[Crossref](#)]
382. Brennan A. McLachlan, G. Cornelis van Kooten, Zehan Zheng. 2020. Country-level climate-crop yield relationships and the impacts of climate change on food security. *SN Applied Sciences* **2**:10. . [[Crossref](#)]
383. Balázs Égert, Jarmila Botev, David Turner. 2020. The contribution of human capital and its policies to per capita income in Europe and the OECD. *European Economic Review* **129**, 103560. [[Crossref](#)]
384. Vally Koubi, Steffen Mohrenberg, Thomas Bernauer. 2020. Ratification of multilateral environmental agreements: Civil society access to international institutions. *Journal of Civil Society* **16**:4, 351–371. [[Crossref](#)]
385. Diego Martínez-Navarro, Ignacio Amate-Fortes, Almudena Guarnido-Rueda. 2020. Inequality and development: is the Kuznets curve in effect today?. *Economia Politica* **37**:3, 703–735. [[Crossref](#)]
386. Michele Battisti, Gianfranco di Vaio, Joseph Zeira. 2020. CONVERGENCE AND DIVERGENCE: A NEW APPROACH, NEW DATA, AND NEW RESULTS. *Macroeconomic Dynamics* **41**, 1–34. [[Crossref](#)]
387. Lasse Skjoldager Eskildsen, Christian Bjørnskov. 2020. Does Freedom of Expression Cause Less Terrorism?. *Political Studies* 003232172095022. [[Crossref](#)]
388. Tarek M Harchaoui, Robbert K J Maseland, Julian A Watkinson. 2020. Carving Out an Empire? How China Strategically Uses Aid to Facilitate Chinese Business Expansion in Africa \*\*. *Journal of African Economies* **1**. . [[Crossref](#)]
389. Muhammad Tariq Majeed. 2020. Do digital governments foster economic growth in the developing world? An empirical analysis. *NETNOMICS: Economic Research and Electronic Networking* **2**. . [[Crossref](#)]
390. Simon Hartmann, Rok Spruk. 2020. Long-term effects of institutional instability. *Empirical Economics* **43**. . [[Crossref](#)]

391. Axel Cronert. 2020. Towards a Swiss Army Knife State? The changing face of economic interventionism in advanced democracies, 1980–2015. *Review of International Political Economy* 46, 1–25. [[Crossref](#)]
392. Anna M. Meyerrose. 2020. The Unintended Consequences of Democracy Promotion: International Organizations and Democratic Backsliding. *Comparative Political Studies* 53:10–11, 1547–1581. [[Crossref](#)]
393. Shu Yu, Richard Jong-A-Pin. 2020. Rich or alive? Political (in)stability, political leader selection and economic growth. *Journal of Comparative Economics* 48:3, 561–577. [[Crossref](#)]
394. Stefan Eichler, Timo Plaga. 2020. The economic record of the government and sovereign bond and stock returns around national elections. *Journal of Banking & Finance* 118, 105832. [[Crossref](#)]
395. Emily J Callander, Stephanie M Topp. 2020. Health inequality in the tropics and its costs: a Sustainable Development Goals alert. *International Health* 12:5, 395–410. [[Crossref](#)]
396. Hiroki Nakamura, Shunsuke Managi. 2020. Entrepreneurship and marginal cost of CO2 emissions in economic development. *Economic Analysis and Policy* 67, 1–14. [[Crossref](#)]
397. Erdiñ Çakmak, M. Alper Çenesiz. 2020. Measuring the size of the informal tourism economy in Thailand. *International Journal of Tourism Research* 22:5, 637–652. [[Crossref](#)]
398. Germán Gutiérrez, Sophie Piton. 2020. Revisiting the Global Decline of the (Non-housing) Labor Share. *American Economic Review: Insights* 2:3, 321–338. [[Crossref](#)]
399. Wade M. Cole. 2020. Working to protect rights: Women's civil liberties in cross-cultural perspective. *Social Science Research* 91, 102461. [[Crossref](#)]
400. Alessio Terzi. 2020. Macroeconomic adjustment in the euro area. *European Economic Review* 128, 103516. [[Crossref](#)]
401. Irem Batool, Kathrin Goldmann. 2020. The role of public and private transport infrastructure capital in economic growth. Evidence from Pakistan. *Research in Transportation Economics* 100886. [[Crossref](#)]
402. Katharina van Treeck. 2020. Measuring the Labor Income Share of Developing Countries: Lessons From Social Accounting Matrices. *Review of Income and Wealth* 66:3, 584–612. [[Crossref](#)]
403. Wen-Chin Wu, Fangjin Ye. 2020. Preferential Trade Agreements, Democracy, and the Risk of Coups d'état. *Social Science Quarterly* 101:5, 1834–1849. [[Crossref](#)]
404. Jiang Qingquan, Shoukat Iqbal Khattak, Manzoor Ahmad, Lin Ping. 2020. A new approach to environmental sustainability: Assessing the impact of monetary policy on CO 2 emissions in Asian economies. *Sustainable Development* 28:5, 1331–1346. [[Crossref](#)]
405. James E. Anderson, Yoto V. Yotov. 2020. Short run gravity. *Journal of International Economics* 126, 103341. [[Crossref](#)]
406. Anna Gumpert, Haishi Li, Andreas Moxnes, Natalia Ramondo, Felix Tintelnot. 2020. The life-cycle dynamics of exporters and multinational firms. *Journal of International Economics* 126, 103343. [[Crossref](#)]
407. Adam Scharpf. 2020. Why Governments Have Their Troops Trained Abroad: Evidence from Latin America. *International Studies Quarterly* 64:3, 734–747. [[Crossref](#)]
408. Gameli Adika. 2020. Economic growth dynamics between resource-rich and resource-poor countries in sub-Saharan Africa: The role of politics and institutions. *African Development Review* 32:3, 303–315. [[Crossref](#)]
409. Samuel Absher, Kevin Grier, Robin Grier. 2020. The economic consequences of durable left-populist regimes in Latin America. *Journal of Economic Behavior & Organization* 177, 787–817. [[Crossref](#)]
410. Stefan Pahl, Marcel P. Timmer. 2020. Do Global Value Chains Enhance Economic Upgrading? A Long View. *The Journal of Development Studies* 56:9, 1683–1705. [[Crossref](#)]

411. Ana Milanez. 2020. Workforce Ageing and Labour Productivity Dynamics. *Naše gospodarstvo/Our economy* 66:3, 1-13. [[Crossref](#)]
412. Susanna G. Campbell, Murat Üngör. 2020. Revisiting human capital and aggregate income differences. *Economic Modelling* 91, 43-64. [[Crossref](#)]
413. Weicheng Lian, Natalija Novta, Evgenia Pugacheva, Yannick Timmer, Petia Topalova. 2020. The Price of Capital Goods: A Driver of Investment Under Threat. *IMF Economic Review* 68:3, 509-549. [[Crossref](#)]
414. Rishabh Sinha. 2020. Sectoral Productivity Gaps and Aggregate Productivity. *The B.E. Journal of Macroeconomics*, ahead of print. [[Crossref](#)]
415. Jun Koga Sudduth. 2020. Who Punishes the Leader? Leader Culpability and Coups during Civil War. *Journal of Conflict Resolution* 62, 002200272095042. [[Crossref](#)]
416. Katarzyna Metelska-Szaniawska. 2020. Post-socialist constitutions: The de jure – de facto gap, its effects and determinants a. *Economics of Transition and Institutional Change* 59. . [[Crossref](#)]
417. Yixiao Zhou. Automation, the future of work and income inequality in the Asia-Pacific region 103-149. [[Crossref](#)]
418. Francisco J Buera, Joseph P Kaboski, Yongseok Shin. 2020. The Macroeconomics of Microfinance. *The Review of Economic Studies* 86. . [[Crossref](#)]
419. Daniel Auguste. 2020. The Impact of Economic Inequality on Entrepreneurship: Does a Society's Stage of Development Make a Difference?. *Sociological Perspectives* 67, 073112142094677. [[Crossref](#)]
420. Pedro Bento. 2020. Quantifying the Effects of Patent Protection on Innovation, Imitation, Growth, and Aggregate Productivity. *The B.E. Journal of Macroeconomics*, ahead of print. [[Crossref](#)]
421. Charles Gottlieb, Jan Grobovšek, Markus Poschke, Fernando Saltiel. 2020. Le travail à domicile : Quelles implications pour les pays en développement ?. *Revue internationale de politique de développement* :12.2. . [[Crossref](#)]
422. Charles Gottlieb, Jan Grobovšek, Markus Poschke, Fernando Saltiel. 2020. Trabajar desde casa: implicaciones para los países en desarrollo. *Revue internationale de politique de développement* :12.2. . [[Crossref](#)]
423. Tiago Sequeira, Hugo Morão. 2020. Growth accounting and regressions: New approach and results. *International Economics* 162, 67-79. [[Crossref](#)]
424. Zahoor Ahmed, Muhammad Mansoor Asghar, Muhammad Nasir Malik, Kishwar Nawaz. 2020. Moving towards a sustainable environment: The dynamic linkage between natural resources, human capital, urbanization, economic growth, and ecological footprint in China. *Resources Policy* 67, 101677. [[Crossref](#)]
425. Recep Ulucak, Emrah Koçak, Seyfettin Erdoğan, Yacouba Kassouri. 2020. Investigating the non-linear effects of globalization on material consumption in the EU countries: Evidence from PSTRE estimation. *Resources Policy* 67, 101667. [[Crossref](#)]
426. MARKUS BRUECKNER, WOJTEK PACZOS, EVI PAPPA. 2020. On the Relationship between Domestic Saving and the Current Account: Evidence and Theory for Developing Countries. *Journal of Money, Credit and Banking* 52:5, 1071-1106. [[Crossref](#)]
427. Federico Rossi. 2020. Human Capital and Macroeconomic Development: A Review of the Evidence. *The World Bank Research Observer* 35:2, 227-262. [[Crossref](#)]
428. Wan-Jiun Chen, Chien-Ho Wang. 2020. A General Cross-Country Panel Analysis for the Effects of Capitals and Energy, on Economic Growth and Carbon Dioxide Emissions. *Sustainability* 12:15, 5916. [[Crossref](#)]



429. Kefei You, Silvia Dal Bianco, Joseph Amankwah-Amoah. 2020. Closing Technological Gaps to Alleviate Poverty: Evidence from 17 Sub-Saharan African Countries. *Technological Forecasting and Social Change* **157**, 120055. [[Crossref](#)]
430. Ulrich Pfister. 2020. The Crafts–Harley view of German industrialization: an independent estimate of the income side of net national product, 1851–1913. *European Review of Economic History* **24**:3, 502–521. [[Crossref](#)]
431. Addisu A. Lashitew, Eric Werker. 2020. Do natural resources help or hinder development? Resource abundance, dependence, and the role of institutions. *Resource and Energy Economics* **61**, 101183. [[Crossref](#)]
432. Sunghoon Chung. 2020. Understanding the role of China's domestic market in the (unequal) growth of world economy. *The World Economy* **43**:8, 2199–2221. [[Crossref](#)]
433. James E Anderson, Mario Larch, Yoto V Yotov. 2020. Transitional Growth and Trade with Frictions: A Structural Estimation Framework. *The Economic Journal* **130**:630, 1583–1607. [[Crossref](#)]
434. Ji Uk Kim. 2020. Technology diffusion, absorptive capacity, and income convergence for Asian developing countries: a dynamic spatial panel approach. *Empirical Economics* **59**:2, 569–598. [[Crossref](#)]
435. Vassilis Monastiriotis, Ivan Zilic. 2020. The economic effects of political disintegration: Lessons from Serbia and Montenegro. *European Journal of Political Economy* 101938. [[Crossref](#)]
436. Marcela Guachamín, Diana Ramírez-Cifuentes, Olga Delgado. 2020. An Uncertainty Thermometer to Measure the Macroeconomic–Financial Risk in South American Countries. *Journal of International Development* **32**:6, 854–890. [[Crossref](#)]
437. Andrew Burke, Imran Zawwar, Stephanie Hussels. 2020. Do freelance independent contractors promote entrepreneurship?. *Small Business Economics* **55**:2, 415–427. [[Crossref](#)]
438. Hye Won Choi, Eunbyeong Heo, Kyungah Kim. 2020. SVAR Analysis of Factors Affecting Fluctuations of Six Major Nonferrous Metal Prices. *Journal of the Korean Society of Mineral and Energy Resources Engineers* **57**:4, 352–361. [[Crossref](#)]
439. Suthan Krishnarajan, Lasse Lykke Rørbæk. 2020. The Two-sided Effect of Elections on Coup Attempts. *Journal of Conflict Resolution* **64**:7–8, 1279–1306. [[Crossref](#)]
440. Tinatin Akhvlediani, Andrzej Cieřlik. 2020. Human capital, technological progress and technology diffusion across Europe: education matters. *Empirica* **47**:3, 475–493. [[Crossref](#)]
441. Chen Ku-Hsieh. 2020. Depreciate to save the economy? An empirical evidence worldwide. *International Journal of Finance & Economics* **14**. . [[Crossref](#)]
442. Muhammad Shakeel, Abdul Salam. 2020. Energy–GDP–exports nexus and energy conservation: evidence from Pakistan and South Asia. *Environmental Science and Pollution Research* **27**:22, 27807–27818. [[Crossref](#)]
443. Kazuki Taketoshi. 2020. How and to what extent has the demographic dividend affected China's economic growth?. *International Journal of Economic Policy Studies* **14**:2, 337–350. [[Crossref](#)]
444. Roseline Tapuwa Karambakuwa, Ronney Ncwadi, Andrew Phiri. 2020. The human capital–economic growth nexus in SSA countries: what can strengthen the relationship?. *International Journal of Social Economics* **47**:9, 1143–1159. [[Crossref](#)]
445. James Lee. 2020. US grand strategy and the origins of the developmental state. *Journal of Strategic Studies* **43**:5, 737–761. [[Crossref](#)]
446. Dimitrios Asteriou, Keith Pilbeam, Cecilia Eny Pratiwi. 2020. Public debt and economic growth: panel data evidence for Asian countries. *Journal of Economics and Finance* **57**. . [[Crossref](#)]
447. Mohamad Ahmad Abou Hamia. 2020. Are developing countries accumulating sufficient total factor productivity to sustain their economic growth and job creation? Empirical evidence from the Middle East and North Africa region. *Review of Development Economics* **85**. . [[Crossref](#)]

448. Christel Koop, Philip Kessler. 2020. Keeping control of regulation? Domestic constraints on the creation of independent authorities in emerging and developing economies. *Governance* **79**. . [\[Crossref\]](#)
449. Nataliia Nazukova. 2020. State funding of education as a factor of economic growth. *Ekonomika i prognozuvannâ* **2020**:2, 97-119. [\[Crossref\]](#)
450. Peyman Hekmatpour. 2020. Inequality and Religiosity in a Global Context: Different Secularization Paths for Developed and Developing Nations. *International Journal of Sociology* **50**:4, 286-309. [\[Crossref\]](#)
451. Mehmet Huseyin Bilgin, Giray Gozgor, Gokhan Karabulut. 2020. How Do Geopolitical Risks Affect Government Investment? An Empirical Investigation. *Defence and Peace Economics* **31**:5, 550-564. [\[Crossref\]](#)
452. Abdulaziz B. Shifa. 2020. TRADE IN HUMAN CAPITAL: A QUANTITATIVE THEORY OF ECONOMIC GROWTH AND THE IMPORT OF HIGHER EDUCATION. *Macroeconomic Dynamics* **84**, 1-39. [\[Crossref\]](#)
453. Pablo Beramendi, Melissa Rogers. 2020. Fiscal decentralization and the distributive incidence of the Great Recession. *Regional Studies* **54**:7, 881-896. [\[Crossref\]](#)
454. Roberto M. Samaniego, Juliana Yu Sun. 2020. The relative price of capital and economic structure. *Review of Economic Dynamics* **37**, 127-155. [\[Crossref\]](#)
455. Pedro Bento. 2020. Competition, innovation, and the number of firms. *Review of Economic Dynamics* **37**, 275-298. [\[Crossref\]](#)
456. Michele Battisti, Tamara Fioroni, Andrea Mario Lavezzi. 2020. WORLD INTEREST RATES AND INEQUALITY: INSIGHT FROM THE GALOR-ZEIRA MODEL. *Macroeconomic Dynamics* **24**:5, 1042-1072. [\[Crossref\]](#)
457. Charles Crabtree, Matt Golder, Thomas Gschwend, Indridi H. Indridason. 2020. It Is Not Only What You Say, It Is Also How You Say It: The Strategic Use of Campaign Sentiment. *The Journal of Politics* **82**:3, 1044-1060. [\[Crossref\]](#)
458. Laura Policardo, Edgar J. Sanchez Carrera. 2020. Can income inequality promote democratization?. *Metroeconomica* **71**:3, 510-532. [\[Crossref\]](#)
459. Marc Helbling, Daniel Meierrieks. 2020. Transnational terrorism and restrictive immigration policies. *Journal of Peace Research* **57**:4, 564-580. [\[Crossref\]](#)
460. Joseph Connors, James Gwartney, Hugo Montesinos-Yufa. 2020. The rise and fall of worldwide income inequality, 1820-2035. *Southern Economic Journal* **87**:1, 216-244. [\[Crossref\]](#)
461. Yuri Landa-Arroyo. 2020. Industrial policies of countries with abundant natural resources in the Association of Southeast Asian Nations and Pacific Alliance. *The Extractive Industries and Society* **7**:3, 1046-1053. [\[Crossref\]](#)
462. Moriah Bostian, Cinzia Daraio, Shawna Grosskopf, Giancarlo Ruocco, William L. Weber. 2020. Sources and uses of knowledge in a dynamic network technology. *International Transactions in Operational Research* **27**:4, 1821-1844. [\[Crossref\]](#)
463. Dierk Herzer, Holger Strulik. 2020. Religiosity and Long-Run Productivity Growth. *Journal of Economics, Management and Religion* **01**:01, 2050001. [\[Crossref\]](#)
464. Stef De Visscher, Markus Eberhardt, Gerdie Everaert. 2020. Estimating and testing the multicountry endogenous growth model. *Journal of International Economics* **125**, 103325. [\[Crossref\]](#)
465. Virmantas Kvedaras, Carlos Garcimartín, Jhonatan Astudillo. 2020. Balance-of-Payments constrained growth dynamics: An empirical investigation. *Economic Modelling* **89**, 232-244. [\[Crossref\]](#)
466. Maryia Markhvida, Brian Walsh, Stephane Hallegatte, Jack Baker. 2020. Quantification of disaster impacts through household well-being losses. *Nature Sustainability* **3**:7, 538-547. [\[Crossref\]](#)

467. Ruba A. Aljarallah. 2020. Natural resource dependency, institutional quality and human capital development in Gulf Countries. *Heliyon* 6:7, e04290. [[Crossref](#)]
468. Medardo Alfonso Palomino Arias. 2020. Comprendiendo la Economía Venezolana: Petróleo y dependencia externa (1960-2017). *Panorama Económico* 28:3, 143-158. [[Crossref](#)]
469. Miller Rivera Lozano, Nicolás Rivera Garzón. 2020. Crecimiento económico de América Latina en el siglo XX. *Panorama Económico* 28:3, 129-142. [[Crossref](#)]
470. Caroline A. Hartzell, Matthew Hoddie. Power Sharing and Democracy in Post-Civil War States 15, . [[Crossref](#)]
471. Gözde ARSLAN, Hicran KASA. 2020. FREE MARKET ECONOMY AND THE EFFECT OF MACROECONOMIC FACTORS ON GROWTH: THE CASE OF SOUTH KOREA. *Ekonomi Maliye İşletme Dergisi* 3:1, 33-45. [[Crossref](#)]
472. Aizhan Bolatbayeva, Alisher Tolepbergen, Nurdaulet Abilov. 2020. A macroeconometric model for Russia. *Russian Journal of Economics* 6:2, 114-143. [[Crossref](#)]
473. Nestor Cheryba. 2020. Foreign Assistance and Consumption Inequality: Does the Structure of Aid Matter?. *Visnyk of the National Bank of Ukraine* :249, 50-70. [[Crossref](#)]
474. Jiří Pour. 2020. Analysis of Relative Over-investment and Under-investment of Economies on Panel Data for 122 Countries of the World. *Politická ekonomie* 68:3, 290-321. [[Crossref](#)]
475. Halit YANIKKAYA, Abdullah ALTUN. 2020. BÜYÜME VE VERİMLİLİK İÇİN GÜNEY-GÜNEY TİCARETİ VE KUZEY-GÜNEY TİCARETİ: BDT ÜLKELERİ İÇİN AMPİRİK BİR ÇALIŞMA. *Hacettepe Üniversitesi İktisadi ve İdari Bilimler Fakültesi Dergisi* 38:2, 387-410. [[Crossref](#)]
476. Government of Rwanda. Competitiveness and Enterprise Development for Innovation-Led Growth 171-216. [[Crossref](#)]
477. Government of Rwanda. Overview: Future Drivers of Growth in Rwanda: Innovation, Integration, Agglomeration, and Competition 1-48. [[Crossref](#)]
478. Jiří Pour. 2020. Context of external economic imbalances adjustments and long-term economic growth. *Český finanční a účetní časopis* 2020:1, 5-26. [[Crossref](#)]
479. Abdallah Othman, Glenn P. Jenkins. 2020. Estimation of the rate of return to capital in the East African Community (EAC) Countries. *Applied Economics* 52:30, 3257-3273. [[Crossref](#)]
480. Kevin S. Nell. 2020. Evaluating the conditional convergence hypothesis in the post-1989 globalization period. *Applied Economics* 52:30, 3308-3326. [[Crossref](#)]
481. Axel Cronert, Axel Hadenius. 2020. Institutional foundations of global well-being. *International Political Science Review* 019251212091718. [[Crossref](#)]
482. Lela Mélon, Rok Spruk. 2020. The impact of e-procurement on institutional quality. *Journal of Public Procurement* 20:4, 333-375. [[Crossref](#)]
483. Muhammad Tahir, Arshad Hayat, Kashif Rashid, Muhammad Asim Afridi, Yasir Bin Tariq. 2020. Human capital and economic growth in OECD countries: some new insights. *Journal of Economic and Administrative Sciences* 36:4, 367-380. [[Crossref](#)]
484. Bert M. Balk, Alicia N. Rambaldi, D. S. Prasada Rao. 2020. MACRO-ECONOMIC MEASURES FOR A GLOBALIZED WORLD: GLOBAL GROWTH AND INFLATION. *Macroeconomic Dynamics* 3, 1-47. [[Crossref](#)]
485. Claire Giordano, Francesco Zollino. 2020. LONG-RUN FACTOR ACCUMULATION AND PRODUCTIVITY TRENDS IN ITALY. *Journal of Economic Surveys* 52. . [[Crossref](#)]
486. Nadiia Proskurnina, Jürgen Kähler, Rosario Cervantes-Martinez. 2020. The impact of real exchange rates on price competitiveness in Eastern European countries. *Economics of Development* 19:1, 45-55. [[Crossref](#)]

487. Daniel Gallardo-Albarrán, Robert Inklaar. 2020. THE ROLE OF CAPITAL AND PRODUCTIVITY IN ACCOUNTING FOR INCOME DIFFERENCES SINCE 1913. *Journal of Economic Surveys* **36**. . [[Crossref](#)]
488. Tiago Cavalcanti, Georgi Kocharkov, Cezar Santos. 2020. Family Planning and Development: Aggregate Effects of Contraceptive Use. *The Economic Journal* **104**. . [[Crossref](#)]
489. Bach Nguyen, Nguyen Phuc Canh, Su Dinh Thanh. 2020. Institutions, Human Capital and Entrepreneurship Density. *Journal of the Knowledge Economy* **91**. . [[Crossref](#)]
490. Jean-Marc Solleder. 2020. Market power and export taxes. *European Economic Review* **125**, 103425. [[Crossref](#)]
491. Jaap W. B. Bos, Claire Economidou, Lu Zhang. 2020. Specialization in the presence of trade and financial openness. *Empirical Economics* **58**:6, 2783–2816. [[Crossref](#)]
492. Tobias Böger, Lutz Leisering. 2020. A new pathway to universalism? Explaining the spread of ‘social’ pensions in the global South, 1967–2011. *Journal of International Relations and Development* **23**:2, 308–338. [[Crossref](#)]
493. Regina Pleninger, Jan-Egbert Sturm. 2020. The effects of economic globalisation and ethnic fractionalisation on redistribution. *World Development* **130**, 104945. [[Crossref](#)]
494. Vassilis Tselios, Andrés Rodríguez-Pose. 2020. Did Decentralisation Affect Citizens’ Perception of the European Union? The Impact during the Height of Decentralisation in Europe. *Economies* **8**:2, 38. [[Crossref](#)]
495. Jialin Guan, Dervis Kirikkaleli, Ayesha Bibi, Weike Zhang. 2020. Natural resources rents nexus with financial development in the presence of globalization: Is the “resource curse” exist or myth?. *Resources Policy* **66**, 101641. [[Crossref](#)]
496. Adalmir Marquetti, Luiz Eduardo Ourique, Henrique Morrone. 2020. A Classical-Marxian Growth Model of Catching Up and the Cases of China, Japan, and India: 1980–2014. *Review of Radical Political Economics* **52**:2, 312–334. [[Crossref](#)]
497. Sarah E. McWilliam, Jung Kwan Kim, Ram Mudambi, Bo Bernhard Nielsen. 2020. Global value chain governance: Intersections with international business. *Journal of World Business* **55**:4, 101067. [[Crossref](#)]
498. Peter Nannestad. 2020. I (Could Have) Told You! Early warning indicators and crisis performance of the 12 “old” Euro-countries under the economic crisis 2008–09. *European Journal of Political Economy* **63**, 101899. [[Crossref](#)]
499. Dohyung Kim, Sun Go. 2020. Human Capital and Environmental Sustainability. *Sustainability* **12**:11, 4736. [[Crossref](#)]
500. YOUNGHO CHANG, ZHENG FANG, SHIGEYUKI HAMORI. 2020. HUMAN CAPITAL AND ENERGY: A DRIVER OR DRAG FOR ECONOMIC GROWTH. *The Singapore Economic Review* **65**:03, 683–714. [[Crossref](#)]
501. Noah Ver Beek, Elvin Vindel, Matthew Kuperus Heun, Paul E. Brockway. 2020. Quantifying the Environmental Impacts of Cookstove Transitions: A Societal Exergy Analysis Based Model of Energy Consumption and Forest Stocks in Honduras. *Energies* **13**:12, 3206. [[Crossref](#)]
502. Ronia Hawash, Guenter Lang. 2020. Does the digital gap matter? Estimating the impact of ICT on productivity in developing countries. *Eurasian Economic Review* **10**:2, 189–209. [[Crossref](#)]
503. NELSON MARCONI, GUILHERME MAGACHO, JOÃO GUILHERME R. MACHADO, RAFAEL DE AZEVEDO RAMIRES LEÃO. 2020. Profit margins, exchange rates and structural change: empirical evidences for the period 1996–2017. *Brazilian Journal of Political Economy* **40**:2, 285–309. [[Crossref](#)]

504. Peter J. Buckley, Roger Strange, Marcel P. Timmer, Gaaitzen J. de Vries. 2020. Catching-up in the global factory: Analysis and policy implications. *Journal of International Business Policy* 3:2, 79-106. [[Crossref](#)]
505. Pál Czeglédi. 2020. The consistency of market beliefs as a determinant of economic freedom. *Constitutional Political Economy* 31:2, 227-258. [[Crossref](#)]
506. Jamie Bologna Pavlik, Andrew T. Young. 2020. Medieval European traditions in representation and state capacity today. *Economics of Governance* 21:2, 133-186. [[Crossref](#)]
507. Christian Henn, Chris Papageorgiou, Jose Manuel Romero, Nikola Spatafora. 2020. Export Quality in Advanced and Developing Economies: Evidence from a New Data Set. *IMF Economic Review* 68:2, 421-451. [[Crossref](#)]
508. Manzoor Ahmad, Shoukat Iqbal Khattak, Anwar Khan, Zia Ur Rahman. 2020. Innovation, foreign direct investment (FDI), and the energy-pollution-growth nexus in OECD region: a simultaneous equation modeling approach. *Environmental and Ecological Statistics* 27:2, 203-232. [[Crossref](#)]
509. Teheni El Ghak, Awatef Gdairia, Boutheina Abassi. 2020. High-tech Entrepreneurship and Total Factor Productivity: the Case of Innovation-Driven Economies. *Journal of the Knowledge Economy* 5. . [[Crossref](#)]
510. Vincent Vandenberghe. 2020. Health, Cognition and Work Capacity Beyond the Age of 50: International Evidence on the Extensive and Intensive Margin of Work. *International Labour Review* 39. . [[Crossref](#)]
511. Furkan BÖRÜ, Kemal Dinçer DİNGEÇ, Dündar Murat DEMİRÖZ. 2020. Teknolojik ve Bilimsel Bilginin Türkiye'de Ekonomik Büyümeye Etkisi (1980 - 2015). *Akdeniz Üniversitesi İktisadi ve İdari Bilimler Fakültesi Dergisi* 111-128. [[Crossref](#)]
512. Shashank Vaid, Caglar Cakan, Mohit Bhandari. 2020. Using Machine Learning to Estimate Unobserved COVID-19 Infections in North America. *Journal of Bone and Joint Surgery Publish Ahead of Print*. . [[Crossref](#)]
513. Nino Fonseca, Marcelino Sánchez-Rivero. 2020. Publication bias and genuine effects: the case of Granger causality between tourism and income. *Current Issues in Tourism* 23:9, 1084-1108. [[Crossref](#)]
514. Juan Carlos Aquino, N. R. Ramírez-Rondán. 2020. Estimating factor shares from nonstationary panel data. *Empirical Economics* 58:5, 2353-2380. [[Crossref](#)]
515. Perry Sadorsky. 2020. Energy Related CO2 Emissions before and after the Financial Crisis. *Sustainability* 12:9, 3867. [[Crossref](#)]
516. Amadou Boly, Seydou Coulibaly, Eric N Kéré. 2020. Tax Policy, Foreign Direct Investment and Spillover Effects in Africa 1. *Journal of African Economies* 29:3, 306-331. [[Crossref](#)]
517. Takuya Shimamura, Takeshi Mizunoya. 2020. Sustainability Prediction Model for Capital City Relocation in Indonesia Based on Inclusive Wealth and System Dynamics. *Sustainability* 12:10, 4336. [[Crossref](#)]
518. Aïssata Coulibaly, Urbain Thierry Yogo. 2020. The path to shared prosperity: Leveraging financial services outreach to create decent jobs in developing countries. *Economic Modelling* 87, 131-147. [[Crossref](#)]
519. Abdella Oumer, Robbert Maseland, Harry Garretsen. 2020. Was de Montesquieu (only half) right? Evidence for a stronger work ethic in cold climates. *Journal of Economic Behavior & Organization* 173, 256-269. [[Crossref](#)]
520. Dany Bahar, Hillel Rapoport, Riccardo Turati. 2020. Birthplace diversity and economic complexity: Cross-country evidence. *Research Policy* 103991. [[Crossref](#)]
521. Thomas Gries, Rainer Grundmann. 2020. Modern sector development: The role of exports and institutions in developing countries. *Review of Development Economics* 24:2, 644-667. [[Crossref](#)]

522. Marianne Ward, John Devereux. 2020. New Income Comparisons for the late Nineteenth and Early Twentieth Century. *Review of Income and Wealth* 38. . [[Crossref](#)]
523. Jiyue Ma, Fei Huang, Aaron Bruhn. 2020. Estimating China's Future Life Insurance Market. *Asia-Pacific Journal of Risk and Insurance*, ahead of print. [[Crossref](#)]
524. Fabian Rocha Aponte. 2020. Firm dispersion and total factor productivity: Are Norwegian salmon producers less efficient over time?. *Aquaculture Economics & Management* 24:2, 161-180. [[Crossref](#)]
525. Enno Schröder, Servaas Storm. 2020. Economic Growth and Carbon Emissions: The Road to "Hothouse Earth" is Paved with Good Intentions. *International Journal of Political Economy* 49:2, 153-173. [[Crossref](#)]
526. Daniel Auguste. 2020. Who Becomes a Business Owner in High-inequality Regimes? The Conditioning Effect of Economic Inequality on the Impact of Individual Educational and Financial Endowment on Entrepreneurship. *Social Currents* 7:2, 131-154. [[Crossref](#)]
527. Zahoor Ahmed, Muhammad Wasif Zafar, Sajid Ali, Danish. 2020. Linking urbanization, human capital, and the ecological footprint in G7 countries: An empirical analysis. *Sustainable Cities and Society* 55, 102064. [[Crossref](#)]
528. Nino Fonseca, Marcelino Sánchez Rivero. 2020. Granger Causality between Tourism and Income: A Meta-regression Analysis. *Journal of Travel Research* 59:4, 642-660. [[Crossref](#)]
529. Brandon J. Kinne. 2020. The Defense Cooperation Agreement Dataset (DCAD). *Journal of Conflict Resolution* 64:4, 729-755. [[Crossref](#)]
530. Christian Bjørnskov, Stefan Voigt. 2020. When Does Terror Induce a State of Emergency? And What Are the Effects?. *Journal of Conflict Resolution* 64:4, 579-613. [[Crossref](#)]
531. Steven M. Karceski, Edgar Kiser. 2020. Is there a limit to the size of the state? The scope conditions of Wagner's law. *Journal of Institutional Economics* 16:2, 217-232. [[Crossref](#)]
532. Pallavi Panda. 2020. Does trade reduce infant mortality? Evidence from sub-Saharan Africa. *World Development* 128, 104851. [[Crossref](#)]
533. Ivan Jaccard, Frank Smets. 2020. Structural asymmetries and financial imbalances in the Eurozone. *Review of Economic Dynamics* 36, 73-102. [[Crossref](#)]
534. Albrecht Glitz, Erik Meyersson. 2020. Industrial Espionage and Productivity. *American Economic Review* 110:4, 1055-1103. [[Abstract](#)] [[View PDF article](#)] [[PDF with links](#)]
535. Christian Bjørnskov, Martin Rode. 2020. Regime types and regime change: A new dataset on democracy, coups, and political institutions. *The Review of International Organizations* 15:2, 531-551. [[Crossref](#)]
536. Zenir Mittmann, Ely José Mattos. 2020. INCOME INEQUALITY AND CARBON DIOXIDE EMISSIONS: EVIDENCE FROM LATIN AMERICA. *Journal of International Development* 32:3, 389-407. [[Crossref](#)]
537. Matthew Fuhrmann. 2020. When Do Leaders Free-Ride? Business Experience and Contributions to Collective Defense. *American Journal of Political Science* 64:2, 416-431. [[Crossref](#)]
538. Andreas Beerli, Franziska J. Weiss, Fabrizio Zilibotti, Josef Zweimüller. 2020. Demand forces of technical change evidence from the Chinese manufacturing industry. *China Economic Review* 60, 101157. [[Crossref](#)]
539. Ahsan Kibria, Reza Oladi, Sherzod B. Akhundjanov. 2020. Foreign direct investment and civil violence in Sub-Saharan Africa. *The World Economy* 43:4, 948-981. [[Crossref](#)]
540. Sebastian Ziaja. 2020. More Donors, More Democracy. *The Journal of Politics* 82:2, 433-447. [[Crossref](#)]



541. Jakub Bartak, Łukasz Jabłoński. 2020. Inequality and growth: What comes from the different inequality measures?. *Bulletin of Economic Research* 72:2, 185-212. [[Crossref](#)]
542. Rafael Ch, Diego A. Martin, Juan F. Vargas. 2020. Measuring the size and growth of cities using nighttime light. *Journal of Urban Economics* 103254. [[Crossref](#)]
543. Andre Mollick, Andre Vianna, Gautam Hazarika. 2020. Democracy in emerging markets: A new perspective on the natural resources curse. *The Extractive Industries and Society* 7:2, 600-610. [[Crossref](#)]
544. Michael Effah Asamoah, Imhotep Paul Alagidede. 2020. Exploring the causal relationships and allocation puzzle between portfolio investments and real sector growth in Sub-Saharan Africa. *Research in International Business and Finance* 52, 101187. [[Crossref](#)]
545. . Economic Growth and Structural Reforms in Europe 7-108. [[Crossref](#)]
546. Alessio Terzi, Pasquale Marco Marrazzo. Structural Reforms and Growth 37-62. [[Crossref](#)]
547. Tobias Geiger, Alex Stomper. 2020. Rising economic damages of natural disasters: Trends in event intensity or capital intensity?. *Proceedings of the National Academy of Sciences* 117:12, 6312-6313. [[Crossref](#)]
548. Tomasz Brodzicki, Tomasz Jurkiewicz, Laura Márquez-Ramos, Stanisław Umiński. 2020. Patterns and determinants of the horizontal and vertical intra-industry trade of regions: panel analysis for Spain & Poland. *Applied Economics* 52:14, 1533-1552. [[Crossref](#)]
549. Hans Pitlik, Martin Rode. 2020. Radical Distrust: Are Economic Policy Attitudes Tempered by Social Trust?. *Social Indicators Research* 125. . [[Crossref](#)]
550. Murat Onder, Israel Nyaburi Nyadera. 2020. The Role of Non -Economic Drivers in Development Planning: The Case of South Korea and Turkey. *International Journal of Public Administration* 43:4, 283-293. [[Crossref](#)]
551. Frédéric Gannon, Gilles Le Garrec, Vincent Touzé. 2020. The South's demographic transition and international capital flows in a financially integrated world economy. *Journal of Demographic Economics* 86:1, 1-45. [[Crossref](#)]
552. Willem Devriendt, Freddy Heylen. 2020. Macroeconomic and distributional effects of demographic change in an open economy—the case of Belgium. *Journal of Demographic Economics* 86:1, 87-124. [[Crossref](#)]
553. Helmut Herwartz, Yabibal M. Walle. 2020. Do Rising Top Incomes Spur Economic Growth? Evidence From OECD Countries Based on a Novel Identification Strategy. *Review of Income and Wealth* 66:1, 126-160. [[Crossref](#)]
554. Jong-Wha Lee. 2020. Convergence Success and the Middle-Income Trap. *The Developing Economies* 58:1, 30-62. [[Crossref](#)]
555. Zheng Fang, Jiang Yu. 2020. The role of human capital in energy-growth nexus: an international evidence. *Empirical Economics* 58:3, 1225-1247. [[Crossref](#)]
556. Caner Demir, Raif Cergibozan, Ali Ari. 2020. Environmental dimension of innovation: time series evidence from Turkey. *Environment, Development and Sustainability* 22:3, 2497-2516. [[Crossref](#)]
557. Stephan B. Bruns, John P.A. Ioannidis. 2020. Determinants of economic growth: Different time different answer?. *Journal of Macroeconomics* 63, 103185. [[Crossref](#)]
558. Javier Cravino, Sam Haltenhof. 2020. Real Exchange Rates, Income per Capita, and Sectoral Input Shares. *The Review of Economics and Statistics* 102:1, 180-194. [[Crossref](#)]
559. Michael T. Dorsch, Paul Maarek. 2020. Economic downturns, inequality, and democratic improvements. *European Journal of Political Economy* 62, 101856. [[Crossref](#)]

560. Waldemar Marz, Johannes Pfeiffer. 2020. Petrodollar recycling, oil monopoly, and carbon taxes. *Journal of Environmental Economics and Management* **100**, 102263. [[Crossref](#)]
561. Justin Caron, Thibault Fally, James Markusen. 2020. Per capita income and the demand for skills. *Journal of International Economics* **123**, 103306. [[Crossref](#)]
562. Ákos Dombi, Theodoris Grigoriadis. 2020. State history and the finance-growth nexus: Evidence from transition economies. *Economic Systems* **44**:1, 100738. [[Crossref](#)]
563. Joseph Ball. 2020. Does socialism really lead to economic failure? The USSR and COMECON Eastern Europe before 1989. *Journal of Labor and Society* **23**:1, 87-110. [[Crossref](#)]
564. Thai-Ha Le, Canh Phuc Nguyen, Thanh Dinh Su, Binh Tran-Nam. 2020. The Kuznets curve for export diversification and income inequality: Evidence from a global sample. *Economic Analysis and Policy* **65**, 21-39. [[Crossref](#)]
565. Eric Kemp-Benedict, Crystal Drakes, Nella Canales. 2020. A Climate-Economy Policy Model for Barbados. *Economies* **8**:1, 16. [[Crossref](#)]
566. Cristiano Antonelli, Christophe Feder. 2020. The new direction of technological change in the global economy. *Structural Change and Economic Dynamics* **52**, 1-12. [[Crossref](#)]
567. Andrzej Kacprzyk, Zbigniew Kuchta. 2020. Shining a new light on the environmental Kuznets curve for CO<sub>2</sub> emissions. *Energy Economics* **87**, 104704. [[Crossref](#)]
568. Eyup Dogan, Panayiotis Tzeremes, Buket Altinoz. 2020. Revisiting the nexus among carbon emissions, energy consumption and total factor productivity in African countries: new evidence from nonparametric quantile causality approach. *Heliyon* **6**:3, e03566. [[Crossref](#)]
569. Chaoran Chen. 2020. Technology adoption, capital deepening, and international productivity differences. *Journal of Development Economics* **143**, 102388. [[Crossref](#)]
570. Tod Van Gunten, Sebastian Kohl. 2020. The inversion of the ‘really big trade-off’: homeownership and pensions in long-run perspective. *West European Politics* **43**:2, 435-463. [[Crossref](#)]
571. Aziz N. Berdiev, James W. Saunoris. 2020. Driven underground by (mis)trust?. *Applied Economics Letters* **27**:4, 286-290. [[Crossref](#)]
572. Daniel Meierrieks, Thomas Gries. 2020. ‘Pay for It Heavily’: Does U.S. Support for Israel Lead to Anti-American Terrorism?. *Defence and Peace Economics* **31**:2, 160-176. [[Crossref](#)]
573. J. Rodrigo Fuentes, Verónica Mies. 2020. TECHNOLOGICAL ABSORPTIVE CAPACITY AND DEVELOPMENT STAGE: DISENTANGLING BARRIERS TO RICHES. *Macroeconomic Dynamics* **9**, 1-36. [[Crossref](#)]
574. Emmanuel Bovari, G  l Giraud, Florent McIsaac. 2020. Financial impacts of climate change mitigation policies and their macroeconomic implications: a stock-flow consistent approach. *Climate Policy* **20**:2, 179-198. [[Crossref](#)]
575. Xiaoping Chen, Yuchen Shao. 2020. Product life-cycle, knowledge capital, and comparative advantage. *Review of International Economics* **28**:1, 252-278. [[Crossref](#)]
576. Lisandra Flach, Fabian Gr  f. 2020. The impact of trade agreements on world export prices. *Review of International Economics* **28**:1, 168-208. [[Crossref](#)]
577. Nino Fonseca, Marcelino S  nchez-Rivero. 2020. Significance bias in the tourism-led growth literature. *Tourism Economics* **26**:1, 137-154. [[Crossref](#)]
578. Juan Jung, Enrique L  pez-Bazo. 2020. On the regional impact of broadband on productivity: The case of Brazil. *Telecommunications Policy* **44**:1, 101826. [[Crossref](#)]
579. Rio Yonson, Ilan Noy. 2020. Disaster Risk Management Policies and the Measurement of Resilience for Philippine Regions. *Risk Analysis* **40**:2, 254-275. [[Crossref](#)]

580. Maya Eden, Paul Gaggl. 2020. Do Poor Countries Really Need More IT?. *The World Bank Economic Review* 34:1, 48-62. [[Crossref](#)]
581. Paul Maarek, Elsa Orgiazzi. 2020. Development and the Labor Share. *The World Bank Economic Review* 34:1, 232-257. [[Crossref](#)]
582. Raul Caruso, Nicola Pontarollo, Roberto Ricciuti. 2020. Regional diffusion of military regimes in sub-Saharan Africa. *Papers in Regional Science* 99:1, 225-244. [[Crossref](#)]
583. 2020. Bibliography. *World Employment and Social Outlook* 2020:1, 123-127. [[Crossref](#)]
584. Patricia Sanz-Córdoba. 2020. The role of infrastructure investment and factor productivity in international tax competition. *Economic Modelling* 85, 30-38. [[Crossref](#)]
585. Kenneth Harttgen, Stefan Lang, Judith Santer, Johannes Seiler. 2020. Modelling Under-Five Mortality through Multilevel Structured Additive Regression with Varying Coefficients for Asia and Sub-Saharan Africa. *The Journal of Development Studies* 56:2, 401-430. [[Crossref](#)]
586. Niclas Berggren, Christian Bjørnskov. 2020. Corruption, judicial accountability and inequality: Unfair procedures may benefit the worst-off. *Journal of Economic Behavior & Organization* 170, 341-354. [[Crossref](#)]
587. Quoc Hung Nguyen. 2020. Financial deepening in a two-sector endogenous growth model with productivity heterogeneity. *The B.E. Journal of Macroeconomics* 20:1. . [[Crossref](#)]
588. Péter Benczúr, Virmantas Kvedaras. 2020. Nonlinear impact of financial deepening on income inequality. *Empirical Economics* 56. . [[Crossref](#)]
589. Kostanca Dhima, Matt Golder. 2020. Secularization Theory and Religion. *Politics and Religion* 2, 1-17. [[Crossref](#)]
590. Muhammad Shakeel, Aziz Ahmed. 2020. Economic growth, exports, and role of energy conservation: Evidence from panel co-integration-based causality models in South Asia. *Energy & Environment* 27, 0958305X1989937. [[Crossref](#)]
591. Daan Freeman, Robert Inklaar, W. Erwin Diewert. 2020. Natural Resources and Missing Inputs in International Productivity Comparisons. *Review of Income and Wealth* 84. . [[Crossref](#)]
592. Luc L. G. Soete, Bart Verspagen, Thomas H. W. Ziesemer. 2020. The productivity effect of public R&D in the Netherlands. *Economics of Innovation and New Technology* 29:1, 31-47. [[Crossref](#)]
593. Kavi Bhalla, Dinesh Mohan, Brian O'Neill. 2020. What can we learn from the historic road safety performance of high-income countries?. *International Journal of Injury Control and Safety Promotion* 27:1, 27-34. [[Crossref](#)]
594. Piotr Gabrielczak, Tomasz Serwach. 2020. Does the euro increase the complexity of exported goods? The case of Estonia. *Journal of Baltic Studies* 51:1, 105-124. [[Crossref](#)]
595. Xun Wang. 2020. Openness, growth convergence and China's development prospects. *China Economic Journal* 13:1, 82-108. [[Crossref](#)]
596. Vjekoslav Domljan, Ivana Domljan. Efficiency of the Bosnian-Herzegovinian Economy 347-354. [[Crossref](#)]
597. Evelyn Huber, John D. Stephens, Kaitlin Alper. The varied sources of increasing wage dispersion 231-252. [[Crossref](#)]
598. Rolf Färe, Daniel Primont, William L. Weber. 2020. Technical change and the von Neumann coefficient of uniform expansion. *European Journal of Operational Research* 280:2, 754-763. [[Crossref](#)]
599. Harrison Adewale Idowu. Benchmarking Global Best Practices for Improving Higher Education Quality in Africa 72-90. [[Crossref](#)]
600. Sadhan Kumar Dey, Alice Dey. Conflict Resolution as a State Mechanism in Modern Times 31-55. [[Crossref](#)]

601. Tim Krieger, Daniel Meierrieks. 2020. Population size and the size of government. *European Journal of Political Economy* **61**, 101837. [[Crossref](#)]
602. Sergio Perelman, Barnabé Walheer. 2020. Economic growth and under-investment: A nonparametric approach. *Economics Letters* **186**, 108824. [[Crossref](#)]
603. Jared Furuta. 2020. Liberal Individualism and the Globalization of Education as a Human Right: The Worldwide Decline of Early Tracking, 1960–2010. *Sociology of Education* **93**:1, 1–19. [[Crossref](#)]
604. Rishi R. Sharma. 2020. DOES THE VAT TAX EXPORTS?. *Economic Inquiry* **58**:1, 225–240. [[Crossref](#)]
605. Bibek Adhikari. 2020. DOES A VALUE-ADDED TAX INCREASE ECONOMIC EFFICIENCY?. *Economic Inquiry* **58**:1, 496–517. [[Crossref](#)]
606. Francisco J. Buera, Ezra Oberfield. 2020. The Global Diffusion of Ideas. *Econometrica* **88**:1, 83–114. [[Crossref](#)]
607. Praopan Pratoomchat. Tourism-Led Growth Hypothesis and Foreign Direct Investment in ASEAN 359–384. [[Crossref](#)]
608. Alexander Monge-Naranjo. 2020. A Theory of Economic Unions: A Comment. *Journal of Monetary Economics* **109**, 128–132. [[Crossref](#)]
609. Richard Startz. 2020. The next hundred years of growth and convergence . *Journal of Applied Econometrics* **35**:1, 99–113. [[Crossref](#)]
610. Toni Juuti. 2020. The Role of Financial Development in the Relationship Between Income Inequality and Economic Growth: An Empirical Approach Using Cross-Country Panel Data. *SSRN Electronic Journal* . [[Crossref](#)]
611. Toni Juuti. 2020. Inequality and Economic Growth: a Method-Dependent Relationship Driven by the Measure of Income Inequality?. *SSRN Electronic Journal* . [[Crossref](#)]
612. Toni Juuti. 2020. Income Inequality and Economic Growth: Is There a Difference between Rising and Falling Top Income Shares?. *SSRN Electronic Journal* . [[Crossref](#)]
613. Natalie Chun, Elisabetta Gentile. 2020. Taking Education to the Next Level: What Can Be Learned from Benchmarking Education across Economies?. *SSRN Electronic Journal* . [[Crossref](#)]
614. Daniel Thompson, Lukasz Grabowski. 2020. Are Labor Market Institutions Countercyclical?. *Socius: Sociological Research for a Dynamic World* **6**, 237802312092162. [[Crossref](#)]
615. Krzysztof Wasniewski. 2020. Energy efficiency as manifestation of collective intelligence in human societies. *Energy* **191**, 116500. [[Crossref](#)]
616. Roberto Pasca di Magliano, Andrea Vaccaro. A Macro-Level Analysis of the Economic and Social Impact of Microfinance in Sub-Saharan Africa 131–150. [[Crossref](#)]
617. Luis Orea, Inmaculada Álvarez-Ayuso, Luis Servén. A Two-Level Top-Down Decomposition of Aggregate Productivity Growth: The Role of Infrastructure 173–191. [[Crossref](#)]
618. Francesco Bailo. The Emergence of the Citizen User 9–51. [[Crossref](#)]
619. Nail M. Gabdullin, Igor A. Kirshin, Aleksey V. Shulaev. 2020. Regulation of inter-regional differences of the Russian Federation regions in the context of national projects «Healthcare» and «Demography». *Level of Life of the Population of the Regions of Russia* **16**:3, 59–69. [[Crossref](#)]
620. Peijie Wang. International Parity Conditions 35–69. [[Crossref](#)]
621. Eva Dziadula. 2020. Marriage and Citizenship Among U.S. Immigrants: Who Marries Whom and Who Becomes a Citizen?. *Eastern Economic Journal* **46**:1, 34–52. [[Crossref](#)]
622. W. Erwin Diewert. Duality in Production 1–118. [[Crossref](#)]

623. Christopher Blair, Erica Chenoweth, Michael C. Horowitz, Evan Perkoski, Philip B.K. Potter. 2020. Honor Among Thieves: Understanding Rhetorical and Material Cooperation Among Militant Groups. *SSRN Electronic Journal* . [[Crossref](#)]
624. Saumik Paul. Global Trends in Labor Income Share: Country Level 31-71. [[Crossref](#)]
625. Saumik Paul. The Economic Forces Behind Labor Income Share: Empirics 191-249. [[Crossref](#)]
626. Mehrdad Esfahani. 2020. A Quantitative Analysis of Life-Cycle Inequality Across U.S. and Europe. *SSRN Electronic Journal* . [[Crossref](#)]
627. Bram Droppers, Wietse H. P. Franssen, Michelle T. H. van Vliet, Bart Nijssen, Fulco Ludwig. 2020. Simulating human impacts on global water resources using VIC-5. *Geoscientific Model Development* 13:10, 5029-5052. [[Crossref](#)]
628. Panagiotis E. Petrakis. Sources of Growth and Development Policy in the Greek Economy 205-222. [[Crossref](#)]
629. Laia Balcells, Chong Chen, Costantino Pischedda. 2020. Do Birds of a Feather Flock Together? Rebel Constituencies and Civil War Alliances. *SSRN Electronic Journal* . [[Crossref](#)]
630. Carlos Mendez. Measuring Labor Productivity and Its Proximate Sources 9-17. [[Crossref](#)]
631. Justin Callais, Andrew T. Young. 2020. Does Rigidity Matter? Constitutional Entrenchment and Growth. *SSRN Electronic Journal* . [[Crossref](#)]
632. Krzysztof Beck. 2020. Determinants of Intra-Industry Trade: An Investigation with Bma for the European Union. *Journal of International Business Research and Marketing* 5:6, 19-22. [[Crossref](#)]
633. Terence D. Agbeyegbe. 2020. Bayesian analysis of output gap in Barbados. *Latin American Journal of Central Banking* 1:1-4, 100020. [[Crossref](#)]
634. Alexandros Fakos. 2020. Online Appendix to 'Government Aid to Firms: Cause or Cure of Misallocation?'. *SSRN Electronic Journal* . [[Crossref](#)]
635. David Kohn, Fernando Leibovici, Michal Szkup. 2020. Financial Development and Trade Liberalization. *SSRN Electronic Journal* . [[Crossref](#)]
636. Michael Murach, Helmut Wagner, Jungsuk Kim, Donghyun Park. 2020. Trajectories to High Income: Growth Dynamics in Japan, the People's Republic of China, and the Republic of Korea. *SSRN Electronic Journal* 2. . [[Crossref](#)]
637. Justin Callais, Andrew T. Young. 2020. Does Constitutional Entrenchment Matter for Economic Freedom?. *SSRN Electronic Journal* 1. . [[Crossref](#)]
638. Jacek Pietrucha, Rafał Żelazny. 2020. TFP spillover effects via trade and FDI channels. *Economic Research-Ekonomska Istraživanja* 33:1, 2509-2525. [[Crossref](#)]
639. Nektarios Michail, Konstantinos Melas, Dimitris Batzilis. 2020. The Relationship Between Container Shipping Trade and Real GDP Growth: A Panel Vector Autoregressive Approach. *SSRN Electronic Journal* 58. . [[Crossref](#)]
640. Hazwan Haini. 2020. Examining the productivity of the ASEAN economies in the presence of transient and persistent efficiency. *Cogent Economics & Finance* 8:1, 1805138. [[Crossref](#)]
641. Lasse Aaskoven, Laure Bokobza, Suthan Krishnarajan, Jacob Nyrup, Casper Sakstrup. 2020. The Morning After: Cabinet Instability and the Purging of Ministers after Failed Coup Attempts in Autocracies. *SSRN Electronic Journal* 18. . [[Crossref](#)]
642. Jamie Bologna Pavlik, Andrew T. Young. 2020. Sorting out the Aid-Corruption Nexus. *SSRN Electronic Journal* . [[Crossref](#)]
643. Rafael A Acevedo, Jose Mora, Andrew T. Young. 2020. The Government Spending Multiplier in Latin American Countries: Does the Institutional Environment Matter?. *SSRN Electronic Journal* 32. . [[Crossref](#)]

644. Oasis Kodila-Tedika, Simplice Asongu. 2020. Tribalism and Finance. *SSRN Electronic Journal* **59**. . [\[Crossref\]](#)
645. Reda Cherif, Fuad Hasanov. 2019. Principles of True Industrial Policy. *Journal of Globalization and Development*, ahead of print. [\[Crossref\]](#)
646. Sonali Jain-Chandra, Tidiane Kinda, Kalpana Kochhar, Shi Piao, Johanna Schauer. 2019. Sharing the Growth Dividend: Analysis of Inequality in Asia. *Journal of Banking and Financial Economics* **2**:2019, 5-28. [\[Crossref\]](#)
647. Tobias Tober. 2019. European institutional integration, trade unions and income inequality. *Socio-Economic Review* **55**. . [\[Crossref\]](#)
648. Ágnes Szunomár. 2019. A digitális nagy ugrás. Lassulás és modernizációs stratégiaváltás Kínában. *Közgazdasági Szemle* **66**:12, 1312-1346. [\[Crossref\]](#)
649. Hazwan Haini. 2019. Internet penetration, human capital and economic growth in the ASEAN economies: evidence from a translog production function. *Applied Economics Letters* **26**:21, 1774-1778. [\[Crossref\]](#)
650. Nicholas Crafts, Pieter Woltjer. 2019. GROWTH ACCOUNTING IN ECONOMIC HISTORY: FINDINGS, LESSONS AND NEW DIRECTIONS. *Journal of Economic Surveys* **46**. . [\[Crossref\]](#)
651. Rok Spruk. 2019. The rise and fall of Argentina. *Latin American Economic Review* **28**:1. . [\[Crossref\]](#)
652. Tyler Kustra. 2019. Make Love, Not War: Do Single Young Men Cause Political Violence?. *International Studies Quarterly* **63**:4, 890-896. [\[Crossref\]](#)
653. Claire Peacock, Karolina Milewicz, Duncan Snidal. 2019. Boilerplate in International Trade Agreements. *International Studies Quarterly* **63**:4, 923-937. [\[Crossref\]](#)
654. Makram El-Shagi, Steven Yamarik. 2019. State-level capital and investment: Refinements and update. *Growth and Change* **50**:4, 1411-1422. [\[Crossref\]](#)
655. Pami Dua, Niti Khandelwal Garg. 2019. Determinants of labour productivity: Comparison between developing and developed countries of Asia-Pacific. *Pacific Economic Review* **24**:5, 686-704. [\[Crossref\]](#)
656. Bertrand Crettez, Naila Hayek, Lisa Morhaim. 2019. Growth and Insecure Private Property of Capital. *Dynamic Games and Applications* **9**:4, 1042-1060. [\[Crossref\]](#)
657. Yixiao Zhou, Rod Tyers. 2019. Automation and inequality in China. *China Economic Review* **58**, 101202. [\[Crossref\]](#)
658. Alfonso Sánchez, Chandreyee Namhata. 2019. What feeds protest participation in sub-Saharan Africa? An empirical analysis. *Global Food Security* **23**, 74-84. [\[Crossref\]](#)
659. Adrian J Shin. 2019. Primary Resources, Secondary Labor: Natural Resources and Immigration Policy. *International Studies Quarterly* **63**:4, 805-818. [\[Crossref\]](#)
660. Rómulo A. Chumacero. 2019. Skills versus Luck: Bolivia and its recent Bonanza. *Latin American Economic Review* **28**:1. . [\[Crossref\]](#)
661. Oleg Badunenko, Harald Tauchmann. 2019. Simar and Wilson two-stage efficiency analysis for Stata. *The Stata Journal: Promoting communications on statistics and Stata* **19**:4, 950-988. [\[Crossref\]](#)
662. Thomas T. Hills, Eugenio Proto, Daniel Sgroi, Chanuki Illushka Seresinha. 2019. Historical analysis of national subjective wellbeing using millions of digitized books. *Nature Human Behaviour* **3**:12, 1271-1275. [\[Crossref\]](#)
663. Nickolaos G. Tzeremes. 2019. Technological change, technological catch-up and export orientation: evidence from Latin American Countries. *Journal of Productivity Analysis* **52**:1-3, 85-100. [\[Crossref\]](#)
664. J. Scott Holladay, Mohammed Mohsin, Shreekar Pradhan. 2019. Environmental Policy Instrument Choice and International Trade. *Environmental and Resource Economics* **74**:4, 1585-1617. [\[Crossref\]](#)



665. Abbas Valadkhani, Jeremy Nguyen. 2019. Long-run effects of disaggregated renewable and non-renewable energy consumption on real output. *Applied Energy* **255**, 113796. [[Crossref](#)]
666. Sibabrata Das, Mukti Upadhyay. 2019. Growth of Real GDP and Total Factor Productivity in Asia with an Emphasis on Malaysian Growth. *Atlantic Economic Journal* **47**:4, 391-413. [[Crossref](#)]
667. Pedro H. Albuquerque, Wassim Rajhi. 2019. Banking stability, natural disasters, and state fragility: Panel VAR evidence from developing countries. *Research in International Business and Finance* **50**, 430-443. [[Crossref](#)]
668. Josip Tica, Luka Šikić. 2019. Endogenous Convergence and International Technological Diffusion Channels. *South East European Journal of Economics and Business* **14**:2, 34-53. [[Crossref](#)]
669. Onur Özdemir. 2019. Financialization and the Labor Share of Income. *Review of Economic Perspectives* **19**:4, 265-306. [[Crossref](#)]
670. Muhammad Ramzan, Bin Sheng, Muhammad Shahbaz, Jian Song, Zhilun Jiao. 2019. Impact of trade openness on GDP growth: Does TFP matter?. *The Journal of International Trade & Economic Development* **28**:8, 960-995. [[Crossref](#)]
671. . Behind-the-Border Policies **39**, . [[Crossref](#)]
672. Ryan H. Murphy, Colin O'Reilly. 2019. Applying panel vector autoregression to institutions, human capital, and output. *Empirical Economics* **57**:5, 1633-1652. [[Crossref](#)]
673. Rafi Amir-ud-Din, Muhammad Usman, Faisal Abbas, Sajid Amin Javed. 2019. Human versus physical capital: issues of accumulation, interaction and endogeneity. *Economic Change and Restructuring* **52**:4, 351-382. [[Crossref](#)]
674. Shaozhou Qi, Huarong Peng, Xiaoling Zhang, Xiujie Tan. 2019. Is energy efficiency of Belt and Road Initiative countries catching up or falling behind? Evidence from a panel quantile regression approach. *Applied Energy* **253**, 113581. [[Crossref](#)]
675. Debasis Mondal. 2019. Structural transformation and productivity growth in India during 1960–2010. *Economic Modelling* **82**, 401-419. [[Crossref](#)]
676. Badri Narayan Rath, Vaseem Akram. 2019. A reassessment of total factor productivity convergence: Evidence from cross-country analysis. *Economic Modelling* **82**, 87-98. [[Crossref](#)]
677. Sanjesh Kumar, Baljeet Singh. 2019. Barriers to the international diffusion of technological innovations. *Economic Modelling* **82**, 74-86. [[Crossref](#)]
678. Zhongfei Chen, Wanjing Huang, Xian Zheng. 2019. The decline in energy intensity: Does financial development matter?. *Energy Policy* **134**, 110945. [[Crossref](#)]
679. James E. Anderson, Mario Larch, Yoto V. Yotov. 2019. Trade and investment in the global economy: A multi-country dynamic analysis. *European Economic Review* **120**, 103311. [[Crossref](#)]
680. Tania Masi, Roberto Ricciuti. 2019. The heterogeneous effect of oil discoveries on democracy. *Economics & Politics* **31**:3, 374-402. [[Crossref](#)]
681. Travis Campbell, Daniele Tavani. 2019. Marx-biased technical change and income distribution: A panel data analysis. *Metroeconomica* **70**:4, 655-687. [[Crossref](#)]
682. Mark Toukan. 2019. International politics by other means: External sources of civil war. *Journal of Peace Research* **56**:6, 812-826. [[Crossref](#)]
683. Christian Bjørnskov, Martin Rode. 2019. Crisis, Ideology, and Interventionist Policy Ratchets. *Political Studies* **67**:4, 815-833. [[Crossref](#)]
684. Christopher Vierhaus. 2019. The international tourism effect of hosting the Olympic Games and the FIFA World Cup. *Tourism Economics* **25**:7, 1009-1028. [[Crossref](#)]
685. José Francisco Baños Pino, Beatriz Tovar. 2019. Explaining cruisers' shore expenditure through a latent class tobit model: Evidence from the Canary Islands. *Tourism Economics* **25**:7, 1105-1133. [[Crossref](#)]

686. Simiao Chen, Michael Kuhn, Klaus Prettnner, David E. Bloom. 2019. Noncommunicable Diseases Attributable To Tobacco Use In China: Macroeconomic Burden And Tobacco Control Policies. *Health Affairs* **38**:11, 1832-1839. [[Crossref](#)]
687. Hasan Engin Duran. 2019. Asymmetries in regional development: Does TFP or capital accumulation matter for spatial inequalities?. *The Journal of Economic Asymmetries* **20**, e00119. [[Crossref](#)]
688. Mahdi Ghodsi. 2019. How do technical barriers to trade affect foreign direct investment? Tariff jumping versus regulation haven hypotheses. *Structural Change and Economic Dynamics* . [[Crossref](#)]
689. Reda Cherif, Fuad Hasanov. 2019. The Leap of the Tiger: Escaping the Middle-income Trap to the Technological Frontier. *Global Policy* **10**:4, 497-511. [[Crossref](#)]
690. Halvard Buhaug, Jonas Vestby. 2019. On Growth Projections in the Shared Socioeconomic Pathways. *Global Environmental Politics* **19**:4, 118-132. [[Crossref](#)]
691. José Alves, António Afonso. 2019. Tax structure for consumption and income inequality: an empirical assessment. *SERIEs* **10**:3-4, 337-364. [[Crossref](#)]
692. Erasmus Kersting, Christopher Kilby. 2019. The rise of supplemental lending at the World Bank. *Canadian Journal of Economics/Revue canadienne d'économie* **52**:4, 1655-1698. [[Crossref](#)]
693. Annie Young Song. 2019. Linking trade and environment in emerging economies: Korea's ambition for making green free trade agreements. *The Pacific Review* **279**, 1-30. [[Crossref](#)]
694. Adalmir Antonio Marquetti, Gabriel Mendoza Pichardo, Guilherme De Oliveira. 2019. ARE THE PARIS AGREEMENT EFFORTS EQUALLY SHARED? GDP AND CO2 PRODUCTION REGULARITIES. *Investigación Económica* **78**:310, 103. [[Crossref](#)]
695. Matteo Coronese, Francesco Lamperti, Klaus Keller, Francesca Chiaromonte, Andrea Roventini. 2019. Evidence for sharp increase in the economic damages of extreme natural disasters. *Proceedings of the National Academy of Sciences* **116**:43, 21450-21455. [[Crossref](#)]
696. Roxana Mihet, Thomas Philippon. The Economics of Big Data and Artificial Intelligence 29-43. [[Crossref](#)]
697. Stefano Costalli, Francesco N. Moro. 2019. Political Transitions and Macro-level Foundations of Political Stability. *Ethnopolitics* **18**:5, 462-477. [[Crossref](#)]
698. Stavros Kourtzidis, Panayiotis Tzeremes, Nickolaos G. Tzeremes. 2019. Conditional time-dependent nonparametric estimators with an application to healthcare production function. *Journal of Applied Statistics* **46**:13, 2481-2490. [[Crossref](#)]
699. Matthew Kuperus Heun, Paul E. Brockway. 2019. Meeting 2030 primary energy and economic growth goals: Mission impossible?. *Applied Energy* **251**, 112697. [[Crossref](#)]
700. Muhammad Shahbaz, Giray Gozgor, Philip Kofi Adom, Shawkat Hammoudeh. 2019. The technical decomposition of carbon emissions and the concerns about FDI and trade openness effects in the United States. *International Economics* **159**, 56-73. [[Crossref](#)]
701. Aydan Dogan. 2019. Investment specific technology shocks and emerging market business cycle dynamics. *Review of Economic Dynamics* **34**, 202-220. [[Crossref](#)]
702. Muhammad Wasif Zafar, Syed Anees Haider Zaidi, Naveed R. Khan, Faisal Mehmood Mirza, Fujun Hou, Syed Ali Ashiq Kirmani. 2019. The impact of natural resources, human capital, and foreign direct investment on the ecological footprint: The case of the United States. *Resources Policy* **63**, 101428. [[Crossref](#)]
703. Holger Strulik. 2019. DESIRE AND DEVELOPMENT. *Macroeconomic Dynamics* **23**:07, 2717-2747. [[Crossref](#)]
704. Nathalie Scholl, Stephan Klasen. 2019. Re-estimating the relationship between inequality and growth. *Oxford Economic Papers* **71**:4, 824-847. [[Crossref](#)]

705. Shaomeng Jia, Claudia R. Williamson. 2019. AID, POLICIES, AND GROWTH: WHY SO MUCH CONFUSION?. *Contemporary Economic Policy* 37:4, 577-599. [[Crossref](#)]
706. Renzo Carriero, Marianna Filandri. 2019. Support for conditional unemployment benefit in European countries: The role of income inequality. *Journal of European Social Policy* 29:4, 498-514. [[Crossref](#)]
707. Inigo Calvo-Sotomayor, Jon Paul Laka, Ricardo Aguado. 2019. Workforce Ageing and Labour Productivity in Europe. *Sustainability* 11:20, 5851. [[Crossref](#)]
708. K.E. Kovalev, O.P. Kizlyak, J.E. Galkina. Automation of Management Functions of Operational Personnel of Railway Stations 1-5. [[Crossref](#)]
709. Yao Yao, Kris Ivanovski, John Inekwe, Russell Smyth. 2019. Human capital and energy consumption: Evidence from OECD countries. *Energy Economics* 84, 104534. [[Crossref](#)]
710. Syed Munawar Shah, Mariani Abdul-Majid, Zulkefly Abdul Karim. 2019. Debt-oriented Capital Structure and Economic Growth: Panel Evidence for OECD Countries. *European Review* 27:4, 519-542. [[Crossref](#)]
711. Edgar Cruz. 2019. Kuznets meets Lucas: structural change and human capital. *Oxford Economic Papers* 71:4, 848-873. [[Crossref](#)]
712. Nune Hovhannisyan. 2019. Technology Gap and International Knowledge Transfer: New Evidence from the Operations of Multinational Corporations. *Eastern Economic Journal* 45:4, 612-638. [[Crossref](#)]
713. Ali Fisunoğlu. 2019. A Dynamic Model of the Spread of Intrastate War. *All Azimuth: A Journal of Foreign Policy and Peace* . [[Crossref](#)]
714. Usman Khalid, Olivier Habimana. 2019. Military Spending and Economic Growth in Turkey: A Wavelet Approach. *Defence and Peace Economics* 29, 1-15. [[Crossref](#)]
715. Isaac Abekah-Koomson, Pang Wei Loon, Gamini Premaratne, Teo Siew Yean. 2019. Total Factor Productivity Growth: Evidence from West African Economies. *Global Business Review* 76, 097215091985619. [[Crossref](#)]
716. Laura N. Bell. 2019. Terrorist assassinations and societal unrest in Africa: a research brief. *Dynamics of Asymmetric Conflict* 12:3, 242-256. [[Crossref](#)]
717. Priyaranjan Jha, Giray Gozgor. 2019. Globalization and taxation: Theory and evidence. *European Journal of Political Economy* 59, 296-315. [[Crossref](#)]
718. Hyun-Hoon Lee, Kwanho Shin. 2019. Nonlinear effects of population aging on economic growth. *Japan and the World Economy* 51, 100963. [[Crossref](#)]
719. Reto Foellmi, Adrian Jaeggi, Rina Rosenblatt-Wisch. 2019. Loss aversion at the aggregate level across countries and its relation to economic fundamentals. *Journal of Macroeconomics* 61, 103136. [[Crossref](#)]
720. Benedikt Herz, Malwina Mejer. 2019. Effects of the European Union trademark: Lessons for the harmonization of intellectual property systems. *Research Policy* 48:7, 1841-1854. [[Crossref](#)]
721. Alex Coad, Antonio Vezzani. 2019. Three cheers for industry: Is manufacturing linked to R&D, exports, and productivity growth?. *Structural Change and Economic Dynamics* 50, 14-25. [[Crossref](#)]
722. Ruba Aljarallah. 2019. Impact of Natural Resource Rents and Institutional Quality on Human Capital: A Case Study of the United Arab Emirates. *Resources* 8:3, 152. [[Crossref](#)]
723. John Devereux. 2019. Arrested Development? Puerto Rico in an American Century. *The Journal of Economic History* 79:3, 708-735. [[Crossref](#)]
724. Sineenat Sermcheep. 2019. Services Export and Economic Growth in ASEAN Countries. *Journal of Asian Economic Integration* 1:2, 163-182. [[Crossref](#)]
725. Martin Roessler. 2019. Political regimes and publicly provided goods: why democracy needs development. *Public Choice* 180:3-4, 301-331. [[Crossref](#)]

726. Savina Gygli, Florian Haelg, Niklas Potrafke, Jan-Egbert Sturm. 2019. The KOF Globalisation Index – revisited. *The Review of International Organizations* 14:3, 543-574. [[Crossref](#)]
727. Zidong An, Alvar Kangur, Chris Papageorgiou. 2019. On the substitution of private and public capital in production. *European Economic Review* 118, 296-311. [[Crossref](#)]
728. Zahoor Ahmed, Zhaohua Wang. 2019. Investigating the impact of human capital on the ecological footprint in India: An empirical analysis. *Environmental Science and Pollution Research* 26:26, 26782-26796. [[Crossref](#)]
729. Phouthakannha NANTHARATH, Eungoo KANG. 2019. The Effects of Foreign Direct Investment and Economic Absorptive Capabilities on the Economic Growth of the Lao People's Democratic Republic. *The Journal of Asian Finance, Economics and Business* 6:3, 151-162. [[Crossref](#)]
730. Pami Dua, Niti Khandelwal Garg. 2019. Sectoral analysis of productivity in the developing and developed economies of Asia-Pacific. *Indian Growth and Development Review* 13:1, 37-71. [[Crossref](#)]
731. Dramane Coulibaly, Luc Désiré Omgba. 2019. Why are some African countries succeeding in their democratic transitions while others are failing?. *Oxford Economic Papers* 91. . [[Crossref](#)]
732. Frank-Borge Wietzke. 2019. Poverty reduction and democratization – new cross-country evidence. *Democratization* 26:6, 935-958. [[Crossref](#)]
733. Matteo Cervellati, Gerrit Meyerheim, Uwe Sunde. 2019. The timing of the demographic transition and economic growth. *Economics Letters* 181, 43-46. [[Crossref](#)]
734. Senay Acikgoz, Mohamed Sami Ben Ali. 2019. Where does economic growth in the Middle Eastern and North African countries come from?. *The Quarterly Review of Economics and Finance* 73, 172-183. [[Crossref](#)]
735. Amelia B Finaret, William A Masters. 2019. Correcting for artifactual correlation between misreported month of birth and attained height-for-age reduces but does not eliminate measured vulnerability to season of birth in poorer countries. *The American Journal of Clinical Nutrition* 110:2, 485-497. [[Crossref](#)]
736. Kensuke Suzuki, Yasuhiro Doi. 2019. Industrial development in Malaysia and Singapore: Empirical analysis with multiple-cone Heckscher–Ohlin Model. *Review of Development Economics* 23:3, 1414-1431. [[Crossref](#)]
737. Kerui Du, Jianglong Li. 2019. Towards a green world: How do green technology innovations affect total-factor carbon productivity. *Energy Policy* 131, 240-250. [[Crossref](#)]
738. Fabian ten Kate, Petros Millionis. 2019. Is capital taxation always harmful for economic growth?. *International Tax and Public Finance* 26:4, 758-805. [[Crossref](#)]
739. Tamara L. Sheldon. 2019. Carbon Emissions and Economic Growth: A Replication and Extension. *Energy Economics* 82, 85-88. [[Crossref](#)]
740. Stefan Pahl, Marcel P. Timmer. 2019. Patterns of vertical specialisation in trade: long-run evidence for 91 countries. *Review of World Economics* 155:3, 459-486. [[Crossref](#)]
741. Juha Ylisalo. 2019. Not always on an equal footing: power, partiality and the conditional effect of multiparty government on public spending. *European Political Science Review* 11:3, 337-355. [[Crossref](#)]
742. Ro-Ting Lin, Lung-Chang Chien, Masamine Jimba, Sugio Furuya, Ken Takahashi. 2019. Implementation of national policies for a total asbestos ban: a global comparison. *The Lancet Planetary Health* 3:8, e341-e348. [[Crossref](#)]
743. M.V. Lee Badgett, Kees Waaldijk, Yana van der Meulen Rodgers. 2019. The relationship between LGBT inclusion and economic development: Macro-level evidence. *World Development* 120, 1-14. [[Crossref](#)]

744. Sacit Hadi AKDEDE, Sidre G.B. Göçekli. 2019. Unionization and Labor Share of Income Distribution: An Empirical Investigation of OECD Countries. *International Journal of Public Finance* 39-48. [[Crossref](#)]
745. Cruz A. Echevarría, Javier García-Enríquez. 2019. The Economic Consequences of the Libyan Spring: A Synthetic Control Analysis. *Defence and Peace Economics* 30:5, 592-608. [[Crossref](#)]
746. Klaus Gründler. 2019. THE VANISHING EFFECT OF FINANCE ON ECONOMIC DEVELOPMENT. *Macroeconomic Dynamics* 88, 1-43. [[Crossref](#)]
747. Oriana Bandiera, Andrea Prat, Stephen Hansen, Raffaella Sadun. 2019. CEO Behavior and Firm Performance. *Journal of Political Economy* . [[Crossref](#)]
748. Krzysztof Beck. 2019. What drives business cycle synchronization? BMA results from the European Union. *Baltic Journal of Economics* 19:2, 248-275. [[Crossref](#)]
749. Gibrán Cruz-Martínez. 2019. Older-Age Social Pensions and Poverty: Revisiting Assumptions on Targeting and Universalism. *Poverty & Public Policy* 11:1-2, 31-56. [[Crossref](#)]
750. Dustin Chambers, Patrick A. McLaughlin, Laura Stanley. 2019. Barriers to prosperity: the harmful impact of entry regulations on income inequality. *Public Choice* 180:1-2, 165-190. [[Crossref](#)]
751. G. P. Manish, Colin O'Reilly. 2019. Banking regulation, regulatory capture and inequality. *Public Choice* 180:1-2, 145-164. [[Crossref](#)]
752. Christina Bampatsou, George Halkos. 2019. Economic growth, efficiency and environmental elasticity for the G7 countries. *Energy Policy* 130, 355-360. [[Crossref](#)]
753. Jevgenijs Steinbuks. 2019. Assessing the accuracy of electricity production forecasts in developing countries. *International Journal of Forecasting* 35:3, 1175-1185. [[Crossref](#)]
754. B. Ravikumar, Ana Maria Santacreu, Michael Sposi. 2019. Capital accumulation and dynamic gains from trade. *Journal of International Economics* 119, 93-110. [[Crossref](#)]
755. Nicholas Larsen, Barry R. Chiswick. 2019. The impact of exposure to missionaries on the English language proficiency and earnings of immigrants in the USA. *International Journal of Manpower* 40:4, 574-590. [[Crossref](#)]
756. Baris Kablamaci. 2019. Does economic openness affect liberal and electoral democracy in a different way? Empirical evidence from developing countries. *Scottish Journal of Political Economy* 66:3, 404-433. [[Crossref](#)]
757. Jan Hagemeyer, Jakub Mućk. 2019. Export-led growth and its determinants: Evidence from Central and Eastern European countries. *The World Economy* 42:7, 1994-2025. [[Crossref](#)]
758. Michelle Kuenzi, John P Tuman, Moritz P Rissmann, Gina MS Lambright. 2019. The economic determinants of electoral volatility in Africa. *Party Politics* 25:4, 621-631. [[Crossref](#)]
759. José Augusto Lopes Da Veiga, Alexandra Ferreira-Lopes, Tiago Neves Sequeira, Marcelo Serra Santos. 2019. Explaining Growth in African Countries – What Matters?. *Acta Oeconomica* 69:3, 467-484. [[Crossref](#)]
760. Lin Ma, Manhua Wu, Xiujuan Tian, Guanheng Zheng, Qinchuan Du, Tian Wu. 2019. China's Provincial Vehicle Ownership Forecast and Analysis of the Causes Influencing the Trend. *Sustainability* 11:14, 3928. [[Crossref](#)]
761. Mara Leticia Rojas, Pablo Daniel Monterubbianesi, Carlos Darío Dabús. 2019. No linealidades y efectos umbral en la relación capital humano-crecimiento económico. *Cuadernos de Economía* 38:77, 425-459. [[Crossref](#)]
762. Eliseo Díaz González, Jorge Fabián Orozco Lalo. 2019. Crecimiento pro pobre en México. *Ensayos de Economía* 29:55, 152-180. [[Crossref](#)]

763. Medardo Alfonso Palomino Arias. 2019. ¿Han funcionado las reformas pro-mercado en Colombia? Crecimiento económico bajo el modelo industrialista y aperturista. *Ensayos de Economía* 29:55, 10-36. [[Crossref](#)]
764. Henry Laverde-Rojas, Juan C. Correa. 2019. Can scientific productivity impact the economic complexity of countries?. *Scientometrics* 120:1, 267-282. [[Crossref](#)]
765. Fernando Río. 2019. Property Rights, Predation, and Productivity\*. *The Scandinavian Journal of Economics* 121:3, 1154-1188. [[Crossref](#)]
766. Thomas Grebel. 2019. What a difference carbon leakage correction makes!. *Journal of Evolutionary Economics* 29:3, 939-971. [[Crossref](#)]
767. Murat Demirci. 2019. TRANSITION OF INTERNATIONAL SCIENCE, TECHNOLOGY, ENGINEERING, AND MATHEMATICS STUDENTS TO THE U.S. LABOR MARKET: THE ROLE OF VISA POLICY. *Economic Inquiry* 57:3, 1367-1391. [[Crossref](#)]
768. Debdulal Mallick. 2019. The growth-volatility relationship redux: what does volatility decomposition tell?. *The B.E. Journal of Macroeconomics* 19:2. . [[Crossref](#)]
769. Wolfgang Lutz, Jesus Crespo Cuaresma, Endale Kebede, Alexia Prskawetz, Warren C. Sanderson, Erich Striessnig. 2019. Education rather than age structure brings demographic dividend. *Proceedings of the National Academy of Sciences* 116:26, 12798-12803. [[Crossref](#)]
770. Ákos Dombi, István Dedák. 2019. Public debt and economic growth: what do neoclassical growth models teach us?. *Applied Economics* 51:29, 3104-3121. [[Crossref](#)]
771. Ryan H. Murphy. 2019. Economic freedom variables endogenous to business cycles. *Journal of Financial Economic Policy* 12:1, 65-75. [[Crossref](#)]
772. Les Ruddock, Steven Ruddock. 2019. Wealth measurement and the role of built asset investment: an empirical comparison. *Engineering, Construction and Architectural Management* 26:5, 766-778. [[Crossref](#)]
773. Florian R Hertel, Nadine M Schöneck. 2019. Conflict perceptions across 27 OECD countries: The roles of socioeconomic inequality and collective stratification beliefs. *Acta Sociologica* 33, 000169931984751. [[Crossref](#)]
774. Melanie Krause, Stefan Szymanski. 2019. Convergence versus the middle-income trap: the case of global soccer. *Applied Economics* 51:27, 2980-2999. [[Crossref](#)]
775. Jaerim Choi. 2019. Offshoring and skill overlap: An empirical investigation. *Review of International Economics* 6. . [[Crossref](#)]
776. Vaseem Akram, Bhushan Praveen Jangam, Badri Narayan Rath. 2019. Does human capital matter for reduction in energy consumption in India?. *International Journal of Energy Sector Management* 13:2, 359-376. [[Crossref](#)]
777. Ryan H. Murphy. 2019. Governance and the dimensions of autocracy. *Constitutional Political Economy* 30:2, 131-148. [[Crossref](#)]
778. Angela Y. Chang, Krycia Cowling, Angela E. Micah, Abigail Chapin, Catherine S. Chen, Gloria Ikilezi, Nafis Sadat, Golsum Tsakalos, Junjie Wu, Theodore Younger, Yingxi Zhao, Bianca S. Zlavog, Cristiana Abbafati, Anwar E Ahmed, Khurshid Alam, Vahid Alipour, Syed Mohamed Aljunid, Mohammed J. Almalki, Nelson Alvis-Guzman, Walid Ammar, Catalina Liliana Andrei, Mina Anjomshoa, Carl Abelardo T. Antonio, Jalal Arabloo, Olatunde Aremu, Marcel Ausloos, Leticia Avila-Burgos, Ashish Awasthi, Martin Amogre Ayanore, Samad Azari, Natasha Azzopardi-Muscat, Mojtaba Bagherzadeh, Till Winfried Bärnighausen, Bernhard T Baune, Mohsen Bayati, Yared Belete Belay, Yihalem Abebe Belay, Habte Belete, Dessalegn Ajema Berbada, Adam E. Berman, Mircea Beuran, Ali Bijani, Reinhard Busse, Lucero Cahuana-Hurtado, Luis Alberto Cámara, Ferrán Catalá-López, Bal Govind Chauhan, Maria-Magdalena Constantin, Christopher Stephen Crowe,



Alexandra Cucu, Koustuv Dalal, Jan-Walter De Neve, Selina Deiparine, Feleke Mekonnen Demeke, Huyen Phuc Do, Manisha Dubey, Maha El Tantawi, Sharareh Eskandarieh, Reza Esmaeili, Mahdi Fakhar, Ali Akbar Fazaeli, Florian Fischer, Nataliya A. Foigt, Takeshi Fukumoto, Nancy Fullman, Adriana Galan, Amiran Gamkrelidze, Kebede Embaye Gezae, Alireza Ghajar, Ahmad Ghashghaee, Ketevan Goginashvili, Annie Haakenstad, Hassan Haghparsat Bidgoli, Samer Hamidi, Hilda L. Harb, Edris Hasanpoor, Hamid Yimam Hassen, Simon I. Hay, Delia Hendrie, Andualem Henok, Ileana Heredia-Pi, Claudiu Herteliu, Chi Linh Hoang, Michael K. Hole, Enayatollah Homaie Rad, Naznin Hossain, Mehdi Hosseinzadeh, Sorin Hostiuc, Olayinka Stephen Ilesanmi, Seyed Sina Naghibi Irvani, Mihajlo Jakovljevic, Amir Jalali, Spencer L. James, Jost B. Jonas, Mikk Jürisson, Rajendra Kadel, Behzad Karami Matin, Amir Kasaeian, Habtamu Kebebe Kasaye, Mesfin Wudu Kassaw, Ali Kazemi Karyani, Roghayeh Khabiri, Junaid Khan, Md Nuruzzaman Khan, Young-Ho Khang, Adnan Kisa, Katarzyna Kissimova-Skarbek, Stefan Kohler, Ai Koyanagi, Kristopher J. Krohn, Ricky Leung, Lee-Ling Lim, Stefan Lorkowski, Azeem Majeed, Reza Malekzadeh, Morteza Mansourian, Lorenzo Giovanni Mantovani, Benjamin Ballard Massenburg, Martin McKee, Varshil Mehta, Atte Meretoja, Tuomo J Meretoja, Neda Milevska Kostova, Ted R Miller, Erkin M Mirrakhimov, Bahram Mohajer, Aso Mohammad Darwesh, Shafiu Mohammed, Farnam Mohebi, Ali H Mokdad, Shane Douglas Morrison, Seyyed Meysam Mousavi, Saravanan Muthupandian, Ahamarshan Jayaraman Nagarajan, Vinay Nangia, Ionut Negoii, Cuong Tat Nguyen, Huong Lan Thi Nguyen, Son Hoang Nguyen, Shirin Nosratnejad, Olanrewaju Oladimeji, Stefano Olgiati, Jacob Olusegun Olusanya, Obinna E Onwujekwe, Stanislav S Ostavnov, Adrian Pana, David M. Pereira, Bakhtiar Piroozii, Sergio I Prada, Mostafa Qorbani, Mohammad Rabiee, Navid Rabiee, Alireza Rafiei, Fakher Rahim, Vafa Rahimi-Movaghar, Usha Ram, Chhabi Lal Ranabhat, Anna Ranta, David Laith Rawaf, Salman Rawaf, Satar Rezaei, Elias Merdassa Roro, Ali Rostami, Salvatore Rubino, Mohamadreza Salahshoor, Abdallah M. Samy, Juan Sanabria, João Vasco Santos, Milena M Santric Milicevic, Bruno Piassi Sao Jose, Miloje Savic, Falk Schwendicke, Sadaf G. Sepanlou, Masood Sepehrimanesh, Aziz Sheikh, Mark G Shrimel, Solomon Sisay, Shahin Soltani, Moslem Soofi, Moslem Soofi, Vinay Srinivasan, Rafael Tabarés-Seisdedos, Anna Torre, Marcos Roberto Tovani-Palone, Bach Xuan Tran, Khanh Bao Tran, Eduardo A. Undurraga, Pascual R Valdez, Job F M van Boven, Veronica Vargas, Yousef Veisani, Francesco S Violante, Sergey Konstantinovich Vladimirov, Vasily Vlassov, Sebastian Vollmer, Giang Thu Vu, Charles D A Wolfe, Naohiro Yonemoto, Mustafa Z. Younis, Mahmoud Yousefifard, Sojib Bin Zaman, Alireza Zangeneh, Elias Asfaw Zegeye, Arash Ziapour, Adrienne Chew, Christopher J L Murray, Joseph L Dieleman. 2019. Past, present, and future of global health financing: a review of development assistance, government, out-of-pocket, and other private spending on health for 195 countries, 1995–2050. *The Lancet* **393**:10187, 2233–2260. [[Crossref](#)]

779. Gwangeun Choi. 2019. Revisiting the redistribution hypothesis with perceived inequality and redistributive preferences. *European Journal of Political Economy* **58**, 220–244. [[Crossref](#)]
780. Caiquan Bai, Kerui Du, Ying Yu, Chen Feng. 2019. Understanding the trend of total factor carbon productivity in the world: Insights from convergence analysis. *Energy Economics* **81**, 698–708. [[Crossref](#)]
781. Guo Xu. 2019. The colonial origins of fiscal capacity: Evidence from patronage governors. *Journal of Comparative Economics* **47**:2, 263–276. [[Crossref](#)]
782. Akira Sasahara. 2019. Explaining the employment effect of exports: Value-added content matters. *Journal of the Japanese and International Economies* **52**, 1–21. [[Crossref](#)]
783. Simone M Schneider. 2019. Why Income Inequality Is Dissatisfying—Perceptions of Social Status and the Inequality-Satisfaction Link in Europe. *European Sociological Review* **35**:3, 409–430. [[Crossref](#)]
784. Sudeshna Ghosh. 2019. Environmental Pollution, Income Inequality, and Household Energy Consumption: Evidence from the United Kingdom. *Journal of International Commerce, Economics and Policy* **10**:02, 1950008. [[Crossref](#)]

785. Jacob M. Meyer, Nicholas R. Jenkins. 2019. Interest Groups, Policy Responses to Global Shocks, and the Relative Likelihood of Currency Crashes Versus Banking Crises. *Journal of International Commerce, Economics and Policy* 10:02, 1950010. [[Crossref](#)]
786. Emrah İ. Çevik, Erdal Atukeren, Turhan Korkmaz. 2019. Trade Openness and Economic Growth in Turkey: A Rolling Frequency Domain Analysis. *Economies* 7:2, 41. [[Crossref](#)]
787. Giuseppe Orlando, Fabio Della Rossa. 2019. An Empirical Test on Harrod's Open Economy Dynamics. *Mathematics* 7:6, 524. [[Crossref](#)]
788. Eric Kemp-Benedict, Jonathan Lamontagne, Timothy Laing, Crystal Drakes. 2019. Climate Impacts on Capital Accumulation in the Small Island State of Barbados. *Sustainability* 11:11, 3192. [[Crossref](#)]
789. Enrico Rubolino, Daniel Waldenström. 2019. Trends and gradients in top tax elasticities: cross-country evidence, 1900–2014. *International Tax and Public Finance* 26:3, 457–485. [[Crossref](#)]
790. Abbas Valadkhani, Jeremy Nguyen, Mark Bowden. 2019. Pathways to reduce CO2 emissions as countries proceed through stages of economic development. *Energy Policy* 129, 268–278. [[Crossref](#)]
791. Sergi Basco, Martí Mestieri. 2019. The world income distribution: the effects of international unbundling of production. *Journal of Economic Growth* 24:2, 189–221. [[Crossref](#)]
792. Martin Henseler, Ingmar Schumacher. 2019. The impact of weather on economic growth and its production factors. *Climatic Change* 154:3–4, 417–433. [[Crossref](#)]
793. Mitja Kovac, Rok Spruk. 2019. Does the ban on trans-fats improve public health? In search of the optimal policy response. *Journal of Regulatory Economics* 55:3, 258–281. [[Crossref](#)]
794. Brandon Prins, Anup Phayal, Ursula E Daxecker. 2019. Fueling rebellion: Maritime piracy and the duration of civil war. *International Area Studies Review* 22:2, 128–147. [[Crossref](#)]
795. A Schuhbauer, AM Cisneros-Montemayor, R Chuenpagdee, UR Sumaila. 2019. Assessing the economic viability of small-scale fisheries: an example from Mexico. *Marine Ecology Progress Series* 617–618, 365–376. [[Crossref](#)]
796. Jeremy Rappleye, Hikaru Komatsu. 2019. Is knowledge capital theory degenerate? PIAAC, PISA, and economic growth. *Compare: A Journal of Comparative and International Education* 76, 1–19. [[Crossref](#)]
797. Thomas B. Pepinsky. 2019. The Return of the Single-Country Study. *Annual Review of Political Science* 22:1, 187–203. [[Crossref](#)]
798. Fumitaka Furuoka. 2019. Do CLMV countries catch up with the older ASEAN members in terms of income level?. *Applied Economics Letters* 26:8, 690–697. [[Crossref](#)]
799. Aldino Musyawwiri, Murat Üngör. 2019. An Overview of the Proximate Determinants of Economic Growth in Indonesia Since 1960. *Bulletin of Indonesian Economic Studies* 55:2, 213–237. [[Crossref](#)]
800. Pierre Yared. 2019. Rising Government Debt: Causes and Solutions for a Decades-Old Trend. *Journal of Economic Perspectives* 33:2, 115–140. [[Abstract](#)] [[View PDF article](#)] [[PDF with links](#)]
801. Justin Yifu Lin, Célestin Monga, Samuel Standaert. 2019. The Inclusive Sustainable Transformation Index. *Social Indicators Research* 143:1, 47–80. [[Crossref](#)]
802. Rishabh Sinha. 2019. Input substitutability and cross-country variation in sectoral linkages. *Economics Letters* 178, 121–124. [[Crossref](#)]
803. M. Donadelli, A. Paradiso, G. Livieri. 2019. Adding cycles into the neoclassical growth model. *Economic Modelling* 78, 162–171. [[Crossref](#)]
804. Roberto Duncan, Patricia Toledo. 2019. Inequality in body mass indices across countries: Evidence from convergence tests. *Economics & Human Biology* 33, 40–57. [[Crossref](#)]
805. John Nkwoma Inekwe, Yi Jin, Maria Rebecca Valenzuela. 2019. Financial conditions and economic growth. *International Review of Economics & Finance* 61, 128–140. [[Crossref](#)]

806. Mario Rafael Silva. 2019. Corporate finance, monetary policy, and aggregate demand. *Journal of Economic Dynamics and Control* **102**, 1-28. [[Crossref](#)]
807. Michael Sposi. 2019. Evolving comparative advantage, sectoral linkages, and structural change. *Journal of Monetary Economics* **103**, 75-87. [[Crossref](#)]
808. Felicitas R. Eckebrecht. 2019. Fueling investments - The effect of the Agreement on Basic Telecommunications. *Telecommunications Policy* **43**:4, 361-379. [[Crossref](#)]
809. MICHAEL T. DORSCH, PAUL MAAREK. 2019. Democratization and the Conditional Dynamics of Income Distribution. *American Political Science Review* **113**:2, 385-404. [[Crossref](#)]
810. Thomas Barnebeck Andersen, Mikkel Barslund, Pieter Vanhuysse. 2019. Join to Prosper? An Empirical Analysis of EU Membership and Economic Growth. *Kyklos* **72**:2, 211-238. [[Crossref](#)]
811. Nepal, Korhonen, Prestemon, Cubbage. 2019. Projecting Global and Regional Forest Area under the Shared Socioeconomic Pathways Using an Updated Environmental Kuznets Curve Model. *Forests* **10**:5, 387. [[Crossref](#)]
812. Suthan Krishnarajan. 2019. Crisis? What crisis? Measuring economic crisis in political science. *Quality & Quantity* **53**:3, 1479-1493. [[Crossref](#)]
813. Marco Letta, Richard S. J. Tol. 2019. Weather, Climate and Total Factor Productivity. *Environmental and Resource Economics* **73**:1, 283-305. [[Crossref](#)]
814. Abbas Valadkhani, Russell Smyth, Jeremy Nguyen. 2019. Effects of primary energy consumption on CO2 emissions under optimal thresholds: Evidence from sixty countries over the last half century. *Energy Economics* **80**, 680-690. [[Crossref](#)]
815. Heli Arminen, Angeliki N. Menegaki. 2019. Corruption, climate and the energy-environment-growth nexus. *Energy Economics* **80**, 621-634. [[Crossref](#)]
816. Zack P. Grant, James Tilley. 2019. Fertile soil: explaining variation in the success of Green parties. *West European Politics* **42**:3, 495-516. [[Crossref](#)]
817. Alexander Monge-Naranjo, Juan M. Sánchez, Raül Santaaulàlia-Llopis. 2019. Natural Resources and Global Misallocation. *American Economic Journal: Macroeconomics* **11**:2, 79-126. [[Abstract](#)] [[View PDF article](#)] [[PDF with links](#)]
818. Daniel Gallardo-Albarrán. 2019. Missed opportunities? Human welfare in Western Europe and the United States, 1913–1950. *Explorations in Economic History* **72**, 57-73. [[Crossref](#)]
819. Badri Narayan Rath, Vaseem Akram, Debi Prasad Bal, Mantu Kumar Mahalik. 2019. Do fossil fuel and renewable energy consumption affect total factor productivity growth? Evidence from cross-country data with policy insights. *Energy Policy* **127**, 186-199. [[Crossref](#)]
820. Chander Kant. 2019. Income convergence and the catch-up index. *The North American Journal of Economics and Finance* **48**, 613-627. [[Crossref](#)]
821. Joyce Hsieh, Ting-Cih Chen, Shu-Chin Lin. 2019. Financial structure, bank competition and income inequality. *The North American Journal of Economics and Finance* **48**, 450-466. [[Crossref](#)]
822. Niclas Rudolfson, Michael C. Dewan, Kee B. Park, Mark G. Shrimme, John G. Meara, Blake C. Alkire. 2019. The economic consequences of neurosurgical disease in low- and middle-income countries. *Journal of Neurosurgery* **130**:4, 1149-1156. [[Crossref](#)]
823. Miroslav Verbič, Rok Spruk. 2019. Political economy of pension reforms: an empirical investigation. *European Journal of Law and Economics* **47**:2, 171-232. [[Crossref](#)]
824. Jeffrey M. Chwioroth, Andrew Walter. The Wealth Effect **2**, . [[Crossref](#)]
825. Marinko Škare, Dean Sinković, Małgorzata Porada-Rochoń. 2019. MEASURING CREDIT STRUCTURE IMPACT ON ECONOMIC GROWTH IN CROATIA USING (VECM) 1990-2018. *Journal of Business Economics and Management* **20**:2, 294-310. [[Crossref](#)]

826. Hikaru Komatsu, Jeremy Rappleye. 2019. Refuting the OECD-World Bank development narrative: was East Asia's 'Economic Miracle' primarily driven by education quality and cognitive skills?. *Globalisation, Societies and Education* 17:2, 101-116. [[Crossref](#)]
827. Hernan Moscoso Boedo. 2019. Optimal Technological Choices After a Structural Break: The Case of the Former Communist Economies. *Eastern European Economics* 57:2, 178-196. [[Crossref](#)]
828. Farid Makhoul. 2019. Is Productivity Affected by Remittances? The Evidence from Morocco. *Journal of International Development* 31:2, 211-222. [[Crossref](#)]
829. Fatma M. Utku-İsmihan. 2019. Knowledge, technological convergence and economic growth: a dynamic panel data analysis of Middle East and North Africa and Latin America. *Quality & Quantity* 53:2, 713-733. [[Crossref](#)]
830. Olena Ivus, Walter Park. 2019. Patent reforms and exporter behaviour: Firm-level evidence from developing countries. *Journal of the Japanese and International Economies* 51, 129-147. [[Crossref](#)]
831. Jonathan Spiteri, Philip von Brockdorff. 2019. Economic development and health outcomes: Evidence from cardiovascular disease mortality in Europe. *Social Science & Medicine* 224, 37-44. [[Crossref](#)]
832. Rob Clark. 2019. The Goldilocks effect: Convergence in national income distributions, 1990-2015. *Social Science Research* 79, 141-159. [[Crossref](#)]
833. Frank Pothén, Heinz Welsch. 2019. Economic development and material use. Evidence from international panel data. *World Development* 115, 107-119. [[Crossref](#)]
834. Joaquín Naval. 2019. WEALTH CONSTRAINTS, MIGRANT SELECTION, AND INEQUALITY IN DEVELOPING COUNTRIES. *Macroeconomic Dynamics* 23:2, 535-567. [[Crossref](#)]
835. Jon C W Pevehouse, Felicity Vabulas. 2019. Nudging the Needle: Foreign Lobbies and US Human Rights Ratings. *International Studies Quarterly* 63:1, 85-98. [[Crossref](#)]
836. Roxana Idu. 2019. Source Country Economic Development and Dynamics of the Skill Composition of Emigration. *Economics* 7:1, 18. [[Crossref](#)]
837. Jamiu Adetola Odugbesan, Husam Rjoub. 2019. Relationship among HIV/AIDS Prevalence, Human Capital, Good Governance, and Sustainable Development: Empirical Evidence from Sub-Saharan Africa. *Sustainability* 11:5, 1348. [[Crossref](#)]
838. Antonis Adam, Sofia Tsarsitalidou. 2019. Environmental policy efficiency: measurement and determinants. *Economics of Governance* 20:1, 1-22. [[Crossref](#)]
839. Aziz N. Berdiev, James W. Saunoris. 2019. Globalization and Informal Entrepreneurship: A Cross-Country Analysis. *Atlantic Economic Journal* 47:1, 65-80. [[Crossref](#)]
840. John Mutti, Eric Ohn. 2019. Taxes and the Location of U.S. Business Activity Abroad. *National Tax Journal* 72:1, 165-192. [[Crossref](#)]
841. Halit Yanıkkaya, Taner Turan. 2019. Polity Stability, Economic Growth, and Investment: A Dynamic Panel Analysis. *Peace Economics, Peace Science and Public Policy* 25:1. . [[Crossref](#)]
842. Le Thanh Tung, Jan Bentzen. 2019. Regional income convergence in Indochina 1970-2015?. *Applied Economics Letters* 26:3, 168-173. [[Crossref](#)]
843. Marinko Škare, Dean Sinković, Małgorzata Porada-Rochoń. 2019. FINANCIAL DEVELOPMENT AND ECONOMIC GROWTH IN POLAND 1990-2018. *Technological and Economic Development of Economy* 25:2, 103-133. [[Crossref](#)]
844. Erin Hye-Won Kim, Changjun Lee, Young Kyung Do. 2019. The Effect of Adult Children's Working Hours on Visits to Elderly Parents: A Natural Experiment in Korea. *Population Research and Policy Review* 38:1, 53-72. [[Crossref](#)]

845. Muhammad Shahbaz, Giray Gozgor, Shawkat Hammoudeh. 2019. Human capital and export diversification as new determinants of energy demand in the United States. *Energy Economics* **78**, 335-349. [[Crossref](#)]
846. Vassilis Tselios, Emma L. Tompkins. 2019. What causes nations to recover from disasters? An inquiry into the role of wealth, income inequality, and social welfare provisioning. *International Journal of Disaster Risk Reduction* **33**, 162-180. [[Crossref](#)]
847. Jakob Mayer, Gabriel Bachner, Karl W. Steininger. 2019. Macroeconomic implications of switching to process-emission-free iron and steel production in Europe. *Journal of Cleaner Production* **210**, 1517-1533. [[Crossref](#)]
848. STEFAN VOIGT, ALEXANDER J. WULF. 2019. What makes prosecutors independent? Analysing the institutional determinants of prosecutorial independence. *Journal of Institutional Economics* **15**:1, 99-120. [[Crossref](#)]
849. Mark Budolfson, Francis Dennig, Marc Fleurbaey, Noah Scovronick, Asher Siebert, Dean Spears, Fabian Wagner. 2019. Optimal Climate Policy and the Future of World Economic Development. *The World Bank Economic Review* **33**:1, 21-40. [[Crossref](#)]
850. Aart Kraay. 2019. The World Bank Human Capital Index: A Guide. *The World Bank Research Observer* **34**:1, 1-33. [[Crossref](#)]
851. Diego Restuccia. 2019. Misallocation and aggregate productivity across time and space. *Canadian Journal of Economics/Revue canadienne d'économie* **52**:1, 5-32. [[Crossref](#)]
852. Martin Tobal. 2019. A model of wage and employment effects of service offshoring. *Canadian Journal of Economics/Revue canadienne d'économie* **52**:1, 303-338. [[Crossref](#)]
853. Omar Joya. 2019. How should resource-rich countries diversify? Estimating forward-linkage effects of mining on productivity growth. *Economics of Transition and Institutional Change* **27**:2, 457-473. [[Crossref](#)]
854. Tamás Vonyó, Alexander Klein. 2019. Why did socialist economies fail? The role of factor inputs reconsidered. *The Economic History Review* **72**:1, 317-345. [[Crossref](#)]
855. Matthias Busse, Ceren Erdogan, Henning Mühlen. 2019. Structural transformation and its relevance for economic growth in Sub-Saharan Africa. *Review of Development Economics* **23**:1, 33-53. [[Crossref](#)]
856. Steffen Mohrenberg, Vally Koubi, Thomas Bernauer. 2019. Effects of funding mechanisms on participation in multilateral environmental agreements. *International Environmental Agreements: Politics, Law and Economics* **19**:1, 1-18. [[Crossref](#)]
857. Jerg Gutmann, Stefan Voigt. 2019. The Independence of Prosecutors and Government Accountability. *Supreme Court Economic Review* **27**, 1-19. [[Crossref](#)]
858. Vassilis Tselios, John Tomaney. 2019. Decentralisation and European identity. *Environment and Planning A: Economy and Space* **51**:1, 133-155. [[Crossref](#)]
859. Andrzej Kacprzyk, Iwona Świczewska. 2019. Is R&D always growth-enhancing? Empirical evidence from the EU countries. *Applied Economics Letters* **26**:2, 163-167. [[Crossref](#)]
860. Giampaolo Garzarelli, Yasmina Rim Limam. 2019. Physical capital, total factor productivity, and economic growth in sub-Saharan Africa. *South African Journal of Economic and Management Sciences* **22**:1. . [[Crossref](#)]
861. Phillip W. Magness. 2019. Inequality, prosperity, and fiscal policy: A case for caution in interpreting income distributions. *The International Trade Journal* **33**:1, 16-30. [[Crossref](#)]
862. Tomasz Legieć. 2019. From limited access to open access order in Taiwan. *Journal of the Asia Pacific Economy* **24**:1, 97-116. [[Crossref](#)]



863. Kwaku Ohene-Asare, Charles Turkson. 2019. Total-Factor Energy Efficiency and Productivity of ECOWAS States: A Slacks-Based Measure with Undesirable Outputs. *Journal of African Business* **20**:1, 91-111. [[Crossref](#)]
864. Erin Hye-Won Kim, Changjun Lee. 2019. Does working long hours cause marital dissolution? Evidence from the reduction in South Korea's workweek standard. *Asian Population Studies* **15**:1, 87-104. [[Crossref](#)]
865. Andrés Rodríguez-Pose, Vassilis Tselios. 2019. Well-being, Political Decentralisation and Governance Quality in Europe. *Journal of Human Development and Capabilities* **20**:1, 69-93. [[Crossref](#)]
866. Matthew Kofi Ocran. Economic Development: Facts, Theories and Evidence 19-70. [[Crossref](#)]
867. Matthew Kofi Ocran. Development Approaches from East Asia 71-130. [[Crossref](#)]
868. Matthew Kofi Ocran. Post-Independence African Economies: 1960–2015 301-372. [[Crossref](#)]
869. Caspar F. Kaiser, Maarten C. M. Vendrik. Different Versions of the Easterlin Paradox: New Evidence for European Countries 27-55. [[Crossref](#)]
870. Faris Maulana, Fithra Faisal Hastiadi. Does Democracy Cause Regional Disintegration? The Effect of Democracy on ASEAN Intra-regional and Extra-regional Trade 37-55. [[Crossref](#)]
871. Andrew T. Young, Estefania Lujan Padilla. Foreign Aid and Recipient State Capacity 169-186. [[Crossref](#)]
872. Ivan Luzardo-Luna. The Lost Decades, 1980–2000: External Debt, Structural Reforms, and a Deep Financial Crisis 107-128. [[Crossref](#)]
873. Linda Matar. Macroeconomic Framework in Pre-conflict Syria 95-113. [[Crossref](#)]
874. Tetsushi Sonobe. Middle-Income Trap in Emerging States 153-177. [[Crossref](#)]
875. Ken Suzuki, Yoko Oishi, Saumik Paul. Globalization, Structural Transformation, and the Labor Income Share 103-150. [[Crossref](#)]
876. Marta Guerriero. Democracy and the Labor Share of Income: A Cross-Country Analysis 151-176. [[Crossref](#)]
877. Giray Gozgor. 2019. Effects of the agricultural commodity and the food price volatility on economic integration: an empirical assessment. *Empirical Economics* **56**:1, 173-202. [[Crossref](#)]
878. Sean Fox, David Ney, Enrica Verrucci. 2019. Liberalisation, urban governance and gridlock: Diagnosing Yangon's mobility crisis. *Cities* **84**, 83-95. [[Crossref](#)]
879. John Nana Francois, Andrew Keinsley. 2019. The long-run relationship between public consumption and output in developing countries: Evidence from panel data. *Economics Letters* **174**, 96-99. [[Crossref](#)]
880. Guy J. Abel, Michael Brottrager, Jesus Crespo Cuaresma, Raya Muttarak. 2019. Climate, conflict and forced migration. *Global Environmental Change* **54**, 239-249. [[Crossref](#)]
881. Ahsan Kibria, Sherzod B. Akhundjanov, Reza Oladi. 2019. Fossil fuel share in the energy mix and economic growth. *International Review of Economics & Finance* **59**, 253-264. [[Crossref](#)]
882. Ambrogio Cesa-Bianchi, Fernando Eguren Martin, Gregory Thwaites. 2019. Foreign booms, domestic busts: The global dimension of banking crises. *Journal of Financial Intermediation* **37**, 58-74. [[Crossref](#)]
883. Renzo Castellares, Jorge Salas. 2019. Contractual imperfections and the impact of crises on trade: Evidence from industry-level data. *Journal of International Economics* **116**, 33-49. [[Crossref](#)]
884. Tom Barker, Murat Üngör. 2019. Vietnam: The next asian Tiger?. *The North American Journal of Economics and Finance* **47**, 96-118. [[Crossref](#)]
885. Brad Wong, Mark Radin. 2019. Benefit-Cost Analysis of a Package of Early Childhood Interventions to Improve Nutrition in Haiti. *Journal of Benefit-Cost Analysis* **10**:S1, 154-184. [[Crossref](#)]



886. Marcel P Timmer, Sébastien Miroudot, Gaaitzen J de Vries. 2019. Functional specialisation in trade. *Journal of Economic Geography* **19**:1, 1-30. [[Crossref](#)]
887. Noam Angrist, Simeon Djankov, Pinelopi Goldberg, Harry Anthony Patrinos. 2019. Measuring Human Capital. *SSRN Electronic Journal* . [[Crossref](#)]
888. Dominik Hartmann, Mayra Bezerra, Flavio L. Pinheiro. 2019. Identifying Smart Strategies for Economic Diversification and Inclusive Growth in Developing Economies. The Case of Paraguay. *SSRN Electronic Journal* . [[Crossref](#)]
889. Marta Guerriero. 2019. Democracy and the Labor Share of Income: A Cross-Country Analysis. *SSRN Electronic Journal* . [[Crossref](#)]
890. Jacob Nyrup. 2019. The Myth of the Benevolent Autocrat? Internal Constraints, External Constraints, and Economic Development in Autocracies. *SSRN Electronic Journal* . [[Crossref](#)]
891. Gerhard Hanappi. 2019. From Integrated Capitalism to Disintegrating Capitalism. Scenarios of a Third World War. *SSRN Electronic Journal* . [[Crossref](#)]
892. Caíque Melo, Marcelo Silva. 2019. Uncertainty Shocks and Business Cycles in Brazil: A DSGE Approach. *SSRN Electronic Journal* . [[Crossref](#)]
893. Linda Glawe, Helmut Wagner. 2019. The Role of Institutional Quality for Economic Growth in Europe. *SSRN Electronic Journal* . [[Crossref](#)]
894. Xiaodong Gong, Jiti Gao, Xuan Liang. 2019. Inter-City Spillover and Intra-City Agglomeration Effects Among Local Labour Markets in China. *SSRN Electronic Journal* . [[Crossref](#)]
895. Sam van Noort. 2019. The Structural Economic Roots of Liberal Democracy. *SSRN Electronic Journal* . [[Crossref](#)]
896. Cristian Incaltarau, Gabriela Carmen Pascariu. Migration and Resilience in the Eastern European Neighbourhood: Remittances as a Mechanism for Boosting Recovery After Shocks 475-513. [[Crossref](#)]
897. Dieter Bender, Michael Frenkel. Wachstum und Entwicklung 279-377. [[Crossref](#)]
898. Jorgen Randers, Johan Rockström, Per-Espen Stoknes, Ulrich Goluke, David Collste, Sarah E. Cornell, Jonathan Donges. 2019. Achieving the 17 Sustainable Development Goals within 9 planetary boundaries. *Global Sustainability* **2** . [[Crossref](#)]
899. Yuki Higuchi, Go Shimada. Industrial Policy, Industrial Development, and Structural Transformation in Asia and Africa 195-218. [[Crossref](#)]
900. Anson Zhou. 2019. The Demographic Composition of Cyclical Consumption Volatility. *SSRN Electronic Journal* . [[Crossref](#)]
901. Robi Kurniawan, Shunsuke Managi. 2019. Linking Wealth and Productivity of Natural Capital for 140 Countries Between 1990 and 2014. *Social Indicators Research* **141**:1, 443-462. [[Crossref](#)]
902. Danko Tarabar, Andrew T. Young. 2019. What Constitutes a Constitutional Amendment Culture?. *SSRN Electronic Journal* . [[Crossref](#)]
903. Seraina Rüegger. 2019. Refugees, ethnic power relations, and civil conflict in the country of asylum. *Journal of Peace Research* **56**:1, 42-57. [[Crossref](#)]
904. Danxia Xie, Buyuan Yang. 2019. Solow to Becker-Lucas. *SSRN Electronic Journal* . [[Crossref](#)]
905. David Kunst. 2019. Premature Deindustrialization through The Lens of Occupations: Which Jobs, Why, and Where?. *SSRN Electronic Journal* . [[Crossref](#)]
906. Alexandros Fakos. 2019. Industrial Policy, Misallocation, and Aggregate Productivity: Policy Implications of Firm-Specific Distortions. *SSRN Electronic Journal* . [[Crossref](#)]
907. Andrzej Cieřlik. 2019. Determinants of foreign direct investment from EU-15 Countries in Poland. *Central European Economic Journal* **6**:53, 39-52. [[Crossref](#)]

908. Damir Stijepic. 2019. An International Comparison of Skills, Traits and Job Mobility. *SSRN Electronic Journal* . [[Crossref](#)]
909. Lionel Roger. 2019. A replication of ‘The long-run impact of foreign aid in 36 African countries: Insights from multivariate time series analysis’ (Oxford Bulletin of Statistics and Economics, 2014). *Economics: The Open-Access, Open-Assessment E-Journal* . [[Crossref](#)]
910. Syed Munawar Shah, Mariani Abdul-Majid. Chapter 7 Corporation’s Threshold for Debt: Implications for Policy Reforms Toward Equity-Biased Corporate Tax System 145-173. [[Crossref](#)]
911. Filippo Buonafede, Giulia Felice, Fabio Lamperti, Lucia Piscitello. Chapter 12 Additive Manufacturing and Global Value Chains: An Empirical Investigation at the Country Level 295-323. [[Crossref](#)]
912. Bernard Njindan Iyke. 2018. The real effect of currency misalignment on productivity growth: evidence from middle-income economies. *Empirical Economics* **55**:4, 1637-1659. [[Crossref](#)]
913. Felix Samy Soliman, Jan Schymik. 2018. Democratization, contracts and comparative advantage. *Economics Letters* **173**, 73-77. [[Crossref](#)]
914. Harald Edquist, Peter Goodridge, Jonathan Haskel, Xuan Li, Edward Lindquist. 2018. How important are mobile broadband networks for the global economic development?. *Information Economics and Policy* **45**, 16-29. [[Crossref](#)]
915. Daryna Grechyna. 2018. Firm size, bank size, and financial development. *Journal of Economic Dynamics and Control* **97**, 19-37. [[Crossref](#)]
916. Roberto Duncan, Patricia Toledo. 2018. Do overweight and obesity prevalence rates converge in Europe?. *Research in Economics* **72**:4, 482-493. [[Crossref](#)]
917. Lena Gerling. 2018. Rebellious Youth: Evidence on the Link between Youth Bulges, Institutional Bottlenecks, and Conflict. *CESifo Economic Studies* **64**:4, 577-616. [[Crossref](#)]
918. Thais Andreia Araujo de Souza, Marina Silva da Cunha. 2018. Performance of Brazilian total factor productivity from 2004 to 2014: a sectoral and regional analysis. *Journal of Economic Structures* **7**:1. . [[Crossref](#)]
919. Matthias Fatke. 2018. Inequality Perceptions, Preferences Conducive to Redistribution, and the Conditioning Role of Social Position. *Societies* **8**:4, 99. [[Crossref](#)]
920. Alberto Javier Iniguez-Montiel, Takashi Kurosaki. 2018. Growth, inequality and poverty dynamics in Mexico. *Latin American Economic Review* **27**:1. . [[Crossref](#)]
921. Qian Dang, Megan Konar, Peter Debaere. 2018. Trade openness and the nutrient use of nations. *Environmental Research Letters* **13**:12, 124016. [[Crossref](#)]
922. Muye Ru, Drew T Shindell, Karl M Seltzer, Shu Tao, Qirui Zhong. 2018. The long-term relationship between emissions and economic growth for SO<sub>2</sub>, CO<sub>2</sub>, and BC. *Environmental Research Letters* **13**:12, 124021. [[Crossref](#)]
923. Erin Hye-Won Kim, Changjun Lee, Young Kyung Do. 2018. The Effect of a Reduced Statutory Workweek on Familial Long-Term Care in Korea. *Journal of Aging and Health* **30**:10, 1620-1641. [[Crossref](#)]
924. Olof Ejermo, Yannu Zheng. 2018. Liberalization of European migration and the immigration of skilled people to Sweden. *IZA Journal of Development and Migration* **8**:1. . [[Crossref](#)]
925. Philipp Galkin, Carlo Andrea Bollino, Tarek Atalla. 2018. Effect of preferential trade agreements on China’s energy trade from Chinese and exporters’ perspectives. *International Journal of Emerging Markets* **13**:6, 1776-1797. [[Crossref](#)]
926. Tomás Gómez Rodríguez, Humberto Ríos Bolívar, Ali Aali Bujari. 2018. SALARIO EFICIENTE Y CRECIMIENTO ECONÓMICO PARA EL CASO DE AMÉRICA LATINA. *Ensayos Revista de Economía* **37**:2. . [[Crossref](#)]

927. . The Backbone of Europe **8**, . [\[Crossref\]](#)
928. Richard H. Steckel, Anna Kjellström. Measuring Community Health Using Skeletal Remains 52-83. [\[Crossref\]](#)
929. Halit Yanikkaya, Taner Turan. 2018. Curse or Blessing? An Empirical Re-examination of Natural Resource–Growth Nexus. *Journal of International Development* **30**:8, 1455-1473. [\[Crossref\]](#)
930. Robi Kurniawan, Shunsuke Managi. 2018. Measuring long-term sustainability with shared socioeconomic pathways using an inclusive wealth framework. *Sustainable Development* **26**:6, 596-605. [\[Crossref\]](#)
931. Qichun He. 2018. Inflation and fertility in a Schumpeterian growth model: Theory and evidence. *International Review of Economics & Finance* **58**, 113-126. [\[Crossref\]](#)
932. Marvin Suesse. 2018. Breaking the Unbreakable Union: Nationalism, Disintegration and the Soviet Economic Collapse. *The Economic Journal* **128**:615, 2933-2967. [\[Crossref\]](#)
933. Nam Kyu Kim. 2018. Transparency and currency crises. *Economics & Politics* **30**:3, 394-422. [\[Crossref\]](#)
934. Ryan Greenaway-McGrevy, Nelson C. Mark, Donggyu Sul, Jyh-Lin Wu. 2018. IDENTIFYING EXCHANGE RATE COMMON FACTORS. *International Economic Review* **59**:4, 2193-2218. [\[Crossref\]](#)
935. Simiao Chen, Michael Kuhn, Klaus Prettnner, David E. Bloom. 2018. The macroeconomic burden of noncommunicable diseases in the United States: Estimates and projections. *PLOS ONE* **13**:11, e0206702. [\[Crossref\]](#)
936. Shenglang Yang, Xunpeng Shi. 2018. Intangible capital and sectoral energy intensity: Evidence from 40 economies between 1995 and 2007. *Energy Policy* **122**, 118-128. [\[Crossref\]](#)
937. Laurie S.M. Reijnders, Gaaitzen J. de Vries. 2018. Technology, offshoring and the rise of non-routine jobs. *Journal of Development Economics* **135**, 412-432. [\[Crossref\]](#)
938. Jong-Wha Lee, Hanol Lee. 2018. Human capital and income inequality \*. *Journal of the Asia Pacific Economy* **23**:4, 554-583. [\[Crossref\]](#)
939. Carsten A. Holz, Yue SUN. 2018. Physical capital estimates for China's provinces, 1952–2015 and beyond. *China Economic Review* **51**, 342-357. [\[Crossref\]](#)
940. Emmanuel Bovari, Oskar Lecuyer, Florent Mc Isaac. 2018. Debt and damages: What are the chances of staying under the 2 ° C warming threshold?. *International Economics* **155**, 92-108. [\[Crossref\]](#)
941. Rainer Kotschy, Uwe Sunde. 2018. Can education compensate the effect of population ageing on macroeconomic performance?. *Economic Policy* **33**:96, 587-634. [\[Crossref\]](#)
942. Robert M. McNab, Son D. Wilson. 2018. Culture matters: what cultural values influence budget transparency?. *Applied Economics* **50**:43, 4593-4605. [\[Crossref\]](#)
943. Pankaj C. Patel, Jonathan P. Doh, Sutirtha Bagchi. 2018. Can Entrepreneurial Initiative Blunt the Economic Inequality–Growth Curse? Evidence From 92 Countries. *Business & Society* **12**, 000765031879710. [\[Crossref\]](#)
944. William W. Murdoch, Fang-I Chu, Allan Stewart-Oaten, Mark Q. Wilber. 2018. Improving wellbeing and reducing future world population. *PLOS ONE* **13**:9, e0202851. [\[Crossref\]](#)
945. Kristien Geenen, Simon De Nys-Ketels. 2018. Pedestrian Itineraries in Kinshasa: On Shortcuts, Permeable Walls, and Welded Shut Gates in a Former Colonial Hospital. *Space and Culture* **18**, 120633121879703. [\[Crossref\]](#)
946. Theodore R. Breton, Gustavo Canavire-Bacarreza. 2018. Low test scores in Latin America: poor schools, poor families or something else?. *Compare: A Journal of Comparative and International Education* **48**:5, 733-748. [\[Crossref\]](#)

947. Robi Kurniawan, Shunsuke Managi. 2018. Economic Growth and Sustainable Development in Indonesia: An Assessment. *Bulletin of Indonesian Economic Studies* 54:3, 339-361. [[Crossref](#)]
948. Quamrul H. Ashraf, Oded Galor. 2018. The Macrogenoeconomics of Comparative Development. *Journal of Economic Literature* 56:3, 1119-1155. [[Abstract](#)] [[View PDF article](#)] [[PDF with links](#)]
949. Jesus Crespo Cuaresma, Jozef Kubala, Kristina Petrikova. 2018. Does income inequality affect aggregate consumption? Revisiting the evidence. *Empirical Economics* 55:2, 905-912. [[Crossref](#)]
950. Juan J. DelaCruz. 2018. Foreign Aid and HIV/AIDS in Latin America and the Caribbean: Should We Adjust the Degree of Response?. *Atlantic Economic Journal* 46:3, 337-349. [[Crossref](#)]
951. Judit Kapás, Pál Czeglédi. 2018. Social orders, and a weak form of the Hayek–Friedman Hypothesis. *International Review of Economics* 65:3, 291-328. [[Crossref](#)]
952. Orhan Torul, Oğuz Öztunalı. 2018. On income and wealth inequality in Turkey. *Central Bank Review* 18:3, 95-106. [[Crossref](#)]
953. Roberto Duncan, Patricia Toledo. 2018. Long-run overweight levels and convergence in body mass index. *Economics & Human Biology* 31, 26-39. [[Crossref](#)]
954. Daniel Gallardo-Albarrán. 2018. Health and economic development since 1900. *Economics & Human Biology* 31, 228-237. [[Crossref](#)]
955. Christina Bampatsou, George Halkos. 2018. Dynamics of productivity taking into consideration the impact of energy consumption and environmental degradation. *Energy Policy* 120, 276-283. [[Crossref](#)]
956. Jan Behringer, Till van Treeck. 2018. Income distribution and the current account. *Journal of International Economics* 114, 238-254. [[Crossref](#)]
957. Holger Graf, Martin Kalthaus. 2018. International research networks: Determinants of country embeddedness. *Research Policy* 47:7, 1198-1214. [[Crossref](#)]
958. Paolo D'Odorico, Kyle Frankel Davis, Lorenzo Rosa, Joel A. Carr, Davide Chiarelli, Jampel Dell'Angelo, Jessica Gephart, Graham K. MacDonald, David A. Seekell, Samir Suweis, Maria Cristina Rulli. 2018. The Global Food-Energy-Water Nexus. *Reviews of Geophysics* 56:3, 456-531. [[Crossref](#)]
959. Pui Sun Tam. 2018. Economic Transition and Growth Dynamics in Asia: Harmony or Discord?. *Comparative Economic Studies* 60:3, 361-387. [[Crossref](#)]
960. Jong-Wha Lee, Ju Hyun Pyun. 2018. North Korea's Economic Integration and Growth Potential. *Asian Economic Journal* 32:3, 301-325. [[Crossref](#)]
961. Gabriel Felbermayr, Benjamin Jung. 2018. Market size and TFP in the Melitz model. *Review of International Economics* 26:4, 869-891. [[Crossref](#)]
962. Xi Chen, Tatiana Plotnikova. 2018. The Measurement of Capital: Retrieving Initial Values from Panel Data. *Review of Income and Wealth* 64:3, 542-562. [[Crossref](#)]
963. Wen Chen. 2018. Cross-Country Income Differences Revisited: Accounting for the Role of Intangible Capital. *Review of Income and Wealth* 64:3, 626-648. [[Crossref](#)]
964. Matteo Fiorini, Bernard Hoekman, Clément Malgouyres. 2018. Services policy reform and manufacturing employment: Evidence from transition economies. *The World Economy* 41:9, 2320-2348. [[Crossref](#)]
965. Nickolaos G. Tzeremes. 2018. Financial Development and Countries' Production Efficiency: A Nonparametric Analysis. *Journal of Risk and Financial Management* 11:3, 46. [[Crossref](#)]
966. Joonghyun Kwak, Michael Wallace. 2018. The Impact of the Great Recession on Perceived Immigrant Threat: A Cross-National Study of 22 Countries. *Societies* 8:3, 52. [[Crossref](#)]
967. Hideki Toya, Mark Skidmore. 2018. Cellular Telephones and Natural Disaster Vulnerability. *Sustainability* 10:9, 2970. [[Crossref](#)]

968. Daniel Norton, Stephen Hynes. 2018. Estimating the Benefits of the Marine Strategy Framework Directive in Atlantic Member States: A Spatial Value Transfer Approach. *Ecological Economics* **151**, 82-94. [[Crossref](#)]
969. Arthur S. Alderson, Roshan K. Pandian. 2018. What is Really Happening with Global Inequality?. *Sociology of Development* **4**:3, 261-281. [[Crossref](#)]
970. Samuel Adams, Edem Kwame Mensah Klobodu, Alfred Apio. 2018. Renewable and non-renewable energy, regime type and economic growth. *Renewable Energy* **125**, 755-767. [[Crossref](#)]
971. Jan Ditzen. 2018. Estimating Dynamic Common-Correlated Effects in Stata. *The Stata Journal: Promoting communications on statistics and Stata* **18**:3, 585-617. [[Crossref](#)]
972. Takayuki Sakamoto. 2018. Four worlds of productivity growth: A comparative analysis of human capital investment policy and productivity growth outcomes. *International Political Science Review* **39**:4, 531-550. [[Crossref](#)]
973. Caner Demir, Raif Cergiboazan. 2018. Determinants of Patent Protection Regimes: A Self-Organizing Map Approach. *Review of Economic Perspectives* **18**:3, 261-283. [[Crossref](#)]
974. Stelios Michalopoulos, Elias Papaioannou. 2018. Spatial Patterns of Development: A Meso Approach. *Annual Review of Economics* **10**:1, 383-410. [[Crossref](#)]
975. Niels Bosma, Jeroen Content, Mark Sanders, Erik Stam. 2018. Institutions, entrepreneurship, and economic growth in Europe. *Small Business Economics* **51**:2, 483-499. [[Crossref](#)]
976. Zoltan J. Acs, Saul Estrin, Tomasz Mickiewicz, László Szerb. 2018. Entrepreneurship, institutional economics, and economic growth: an ecosystem perspective. *Small Business Economics* **51**:2, 501-514. [[Crossref](#)]
977. Tiago Neves Sequeira, Marcelo Serra Santos, Manuela Magalhães. 2018. Climate change and economic growth: a heterogeneous panel data approach. *Environmental Science and Pollution Research* **25**:23, 22725-22735. [[Crossref](#)]
978. Eva Dziadula. 2018. Timing of Naturalization Among US Immigrants. *Journal of International Migration and Integration* **19**:3, 791-811. [[Crossref](#)]
979. Zhi Luo, Guanghua Wan, Chen Wang, Xun Zhang. 2018. Aging and inequality: The link and transmission mechanisms. *Review of Development Economics* **22**:3, 885-903. [[Crossref](#)]
980. Viktoria C. E. Langer, Wolfgang Maennig, Felix Richter. 2018. The Olympic Games as a News Shock. *Journal of Sports Economics* **19**:6, 884-906. [[Crossref](#)]
981. Pablo Beramendi, Melissa Rogers. 2018. Disparate geography and the origins of tax capacity. *The Review of International Organizations* **2**. . [[Crossref](#)]
982. A. S. Vasilenko, D. N. Chernyadyev, S. A. Vlasov. 2018. Structural transformation of China's economy: Success or failure?. *Voprosy Ekonomiki* :7, 65-81. [[Crossref](#)]
983. Klaus Prettnner, Niels Geiger, Johannes A. Schwarzer. 2018. Die Auswirkungen der Automatisierung auf Wachstum, Beschäftigung und Ungleichheit. *Perspektiven der Wirtschaftspolitik* **19**:2, 59-77. [[Crossref](#)]
984. Francisca Rosendo Silva, Marta Simões, João Sousa Andrade. 2018. Health investments and economic growth: a quantile regression approach. *International Journal of Development Issues* **17**:2, 220-245. [[Crossref](#)]
985. Justin George, Todd Sandler. 2018. Demand for military spending in NATO, 1968–2015: A spatial panel approach. *European Journal of Political Economy* **53**, 222-236. [[Crossref](#)]
986. Zhongda Li, Lu Liu. 2018. Financial globalization, domestic financial freedom and risk sharing across countries. *Journal of International Financial Markets, Institutions and Money* **55**, 151-169. [[Crossref](#)]



987. Recep Ulucak, Faik Bilgili. 2018. A reinvestigation of EKC model by ecological footprint measurement for high, middle and low income countries. *Journal of Cleaner Production* **188**, 144-157. [[Crossref](#)]
988. Willa W. Chen, Rohit S. Deo. 2018. Subsampling based inference for U statistics under thick tails using self-normalization. *Statistics & Probability Letters* **138**, 95-103. [[Crossref](#)]
989. Lucia Tajoli, Giulia Felice. 2018. Global Value Chains Participation and Knowledge Spillovers in Developed and Developing Countries: An Empirical Investigation. *The European Journal of Development Research* **30**:3, 505-532. [[Crossref](#)]
990. Ches Thurber. 2018. Ethnic Barriers to Civil Resistance. *Journal of Global Security Studies* **3**:3, 255-270. [[Crossref](#)]
991. Florent Silve, Alexander Plekhanov. 2018. Institutions, innovation and growth. *Economics of Transition* **26**:3, 335-362. [[Crossref](#)]
992. Zheming Yan, Rui Shi, Zhiming Yang. 2018. ICT Development and Sustainable Energy Consumption: A Perspective of Energy Productivity. *Sustainability* **10**:7, 2568. [[Crossref](#)]
993. Moises Arce, Rebecca E. Miller, Christopher F. Patane, Marc S. Polizzi. 2018. Resource Wealth, Democracy and Mobilisation. *The Journal of Development Studies* **54**:6, 949-967. [[Crossref](#)]
994. Patricia Bromley, Evan Schofer, Wesley Longhofer. 2018. Organizing for Education: A Cross-National, Longitudinal Study of Civil Society Organizations and Education Outcomes. *VOLUNTAS: International Journal of Voluntary and Nonprofit Organizations* **29**:3, 526-540. [[Crossref](#)]
995. Giray Gozgor. 2018. A new approach to the renewable energy-growth nexus: evidence from the USA. *Environmental Science and Pollution Research* **25**:17, 16590-16600. [[Crossref](#)]
996. Ainhua Aparicio Fenoll. 2018. English proficiency and mathematics test scores of immigrant children in the US. *Economics of Education Review* **64**, 102-113. [[Crossref](#)]
997. Balint Lenkei, Ghulam Mustafa, Michela Vecchi. 2018. Growth in emerging economies: Is there a role for education?. *Economic Modelling* **73**, 240-253. [[Crossref](#)]
998. Mehmet Pinar, Engin Volkan. 2018. Institutions and information flows, and their effect on capital flows. *Information Economics and Policy* **43**, 34-47. [[Crossref](#)]
999. Jin Lei, Jiaping Qiu, Chi Wan. 2018. Asset tangibility, cash holdings, and financial development. *Journal of Corporate Finance* **50**, 223-242. [[Crossref](#)]
1000. Klaus Prettnner, Holger Strulik. 2018. Trade and productivity: The family connection redux. *Journal of Macroeconomics* **56**, 276-291. [[Crossref](#)]
1001. Mario Solis-Garcia, Yingtong Xie. 2018. Measuring the size of the shadow economy using a dynamic general equilibrium model with trends. *Journal of Macroeconomics* **56**, 258-275. [[Crossref](#)]
1002. S. Nghiem, X-B. Vu, A. Barnett. 2018. Trends and determinants of weight gains among OECD countries: an ecological study. *Public Health* **159**, 31-39. [[Crossref](#)]
1003. Giray Gozgor. 2018. Does the structure of employment affect the external imbalances? Theory and evidence. *Structural Change and Economic Dynamics* **45**, 77-83. [[Crossref](#)]
1004. Tarek M Harchaoui, Murat Üngör. 2018. The Lion on the Move Towards the World Frontier: Catching Up or Remaining Stuck?. *Journal of African Economies* **27**:3, 251-273. [[Crossref](#)]
1005. Anatole Goundan. 2018. Colonial Legacy and Economic Efficiency across Africa: A Metafrontier Approach. *African Development Review* **30**:2, 187-199. [[Crossref](#)]
1006. Dene T. Hurley, Nikolaos Papanikolaou. 2018. An Investigation of China-U.S. Bilateral Trade and Exchange Rate Changes Using the Autoregressive Distributed Lag Model. *Economic Papers: A journal of applied economics and policy* **37**:2, 162-179. [[Crossref](#)]
1007. Pál Czeglédi, Carlos Newland. 2018. HOW IS THE PRO-CAPITALIST MENTALITY GLOBALLY DISTRIBUTED?. *Economic Affairs* **38**:2, 240-256. [[Crossref](#)]



1008. Erkan Gören. 2018. Consequences of Linguistic Distance for Economic Growth. *Oxford Bulletin of Economics and Statistics* **80**:3, 625–658. [[Crossref](#)]
1009. Ryan Joy, Cesar M. Rodriguez, Inder J. Ruprah. 2018. The Labor Share Squeeze in Latin America: A Dynamic Heterogeneous Approach. *Global Economy Journal* **18**:2, 20170083. [[Crossref](#)]
1010. Eric Kemp-Benedict, Crystal Drakes, Timothy Laing. 2018. Export-Led Growth, Global Integration, and the External Balance of Small Island Developing States. *Economies* **6**:2, 35. [[Crossref](#)]
1011. Paul Welfens, Fabian Baier. 2018. BREXIT and Foreign Direct Investment: Key Issues and New Empirical Findings. *International Journal of Financial Studies* **6**:2, 46. [[Crossref](#)]
1012. Andrew Dawson. 2018. Police Legitimacy and Homicide: A Macro-Comparative Analysis. *Social Forces* **24**. . [[Crossref](#)]
1013. Nicola Pontarollo, Roberto Ricciuti. 2018. A Note on Borders, Dyads and the Distribution of Democracy in Sub-Saharan Africa. *Peace Economics, Peace Science and Public Policy* **24**:2. . [[Crossref](#)]
1014. Rolf Strietholt, Ronny Scherer. 2018. The Contribution of International Large-Scale Assessments to Educational Research: Combining Individual and Institutional Data Sources. *Scandinavian Journal of Educational Research* **62**:3, 368–385. [[Crossref](#)]
1015. Marina Povitkina. 2018. The limits of democracy in tackling climate change. *Environmental Politics* **27**:3, 411–432. [[Crossref](#)]
1016. Abdul Abiad, Margarita Debuque-Gonzales, Andrea Loren Sy. 2018. The Evolution and Impact of Infrastructure in Middle-Income Countries: Anything Special?. *Emerging Markets Finance and Trade* **54**:6, 1239–1263. [[Crossref](#)]
1017. Gemma Estrada, Xuehui Han, Donghyun Park, Shu Tian. 2018. Asia's Middle-Income Challenge: An Overview. *Emerging Markets Finance and Trade* **54**:6, 1208–1224. [[Crossref](#)]
1018. Joonkyung Ha, Sang-Hyop Lee. 2018. Population Aging and the Possibility of a Middle-Income Trap in Asia. *Emerging Markets Finance and Trade* **54**:6, 1225–1238. [[Crossref](#)]
1019. Pierre Pecher. 2018. Ethnic divisions and the effect of appropriative competition intensity on economic performance. *Economics of Governance* **19**:2, 165–193. [[Crossref](#)]
1020. Asger M. Wingender. 2018. A consistent measure of hours worked for international productivity comparisons. *Economics Letters* **166**, 14–17. [[Crossref](#)]
1021. Neha Bairoliya, David Canning, Ray Miller, Akshar Saxena. 2018. The macroeconomic and welfare implications of rural health insurance and pension reforms in China. *The Journal of the Economics of Ageing* **11**, 71–92. [[Crossref](#)]
1022. Keith E. Maskus, Lei Yang. 2018. Domestic patent rights, access to technologies and the structure of exports. *Canadian Journal of Economics/Revue canadienne d'économie* **51**:2, 483–509. [[Crossref](#)]
1023. Laurent Brembilla. 2018. Longevity and welfare in general equilibrium. *Mathematical Social Sciences* **93**, 22–36. [[Crossref](#)]
1024. Michael Berlemann, Daniela Wenzel. 2018. Hurricanes, economic growth and transmission channels. *World Development* **105**, 231–247. [[Crossref](#)]
1025. Aleš Kocourek, Iva Nedomlelová. 2018. Three levels of education and the economic growth. *Applied Economics* **50**:19, 2103–2116. [[Crossref](#)]
1026. Daniele Tavani, Luca Zamparelli. Endogenous Technical Change in Alternative Theories of Growth and Distribution 139–174. [[Crossref](#)]
1027. Muhlis Can, Giray Gozgor. 2018. Effects of export product diversification on quality upgrading: an empirical study. *The Journal of International Trade & Economic Development* **27**:3, 293–313. [[Crossref](#)]
1028. Jan Ditzen. 2018. Cross-country convergence in a general Lotka–Volterra model. *Spatial Economic Analysis* **13**:2, 191–211. [[Crossref](#)]

1029. Sjoerd Beugelsdijk, Mariko J. Klasing, Petros Milionis. 2018. Regional economic development in Europe: the role of total factor productivity. *Regional Studies* 52:4, 461-476. [[Crossref](#)]
1030. Martin Schröder. 2018. Income Inequality and Life Satisfaction: Unrelated Between Countries, Associated Within Countries Over Time. *Journal of Happiness Studies* 19:4, 1021-1043. [[Crossref](#)]
1031. Avik Sinha, Muhammad Shahbaz. 2018. Estimation of Environmental Kuznets Curve for CO2 emission: Role of renewable energy generation in India. *Renewable Energy* 119, 703-711. [[Crossref](#)]
1032. Fan Zhang, Joshua Hall, Feng Yao. 2018. DOES ECONOMIC FREEDOM AFFECT THE PRODUCTION FRONTIER? A SEMIPARAMETRIC APPROACH WITH PANEL DATA. *Economic Inquiry* 56:2, 1380-1395. [[Crossref](#)]
1033. Hansjörg Herr, Bea Ruoff. 2018. Insufficient Economic Convergence in the World Economy: How Do Economists Explain Why Too Many Countries Do Not Catch-up?. *Agrarian South: Journal of Political Economy* 7:1, 1-27. [[Crossref](#)]
1034. Talan B. İşcan. 2018. Redistributive Land Reform and Structural Change in Japan, South Korea, and Taiwan. *American Journal of Agricultural Economics* 100:3, 732-761. [[Crossref](#)]
1035. ROBBERT MASELAND. 2018. Is colonialism history? The declining impact of colonial legacies on African institutional and economic development. *Journal of Institutional Economics* 14:2, 259-287. [[Crossref](#)]
1036. Adrian Jaeggi, Stefan Legge, Lukas Schmid. 2018. Dyadic value distance: Determinants and consequences. *Economics Letters* 165, 48-53. [[Crossref](#)]
1037. Stefan Csordás. 2018. Commodity exports and labour productivity in the long run. *Applied Economics Letters* 25:6, 362-365. [[Crossref](#)]
1038. MARCUS ALBAN. 2018. The degradation of Brazilian socioeconomics. *Brazilian Journal of Political Economy* 38:1, 167-183. [[Crossref](#)]
1039. Helmut Herwartz, Yabibal M. Walle. 2018. A powerful wild bootstrap diagnosis of panel unit roots under linear trends and time-varying volatility. *Computational Statistics* 33:1, 379-411. [[Crossref](#)]
1040. Dierk Herzer, Julian Donaubauer. 2018. The long-run effect of foreign direct investment on total factor productivity in developing countries: a panel cointegration analysis. *Empirical Economics* 54:2, 309-342. [[Crossref](#)]
1041. Michele Battisti, Massimo Del Gatto, Christopher F. Parmeter. 2018. Labor productivity growth: disentangling technology and capital accumulation. *Journal of Economic Growth* 23:1, 111-143. [[Crossref](#)]
1042. Alberto Alesina, Michele Battisti, Joseph Zeira. 2018. Technology and labor regulations: theory and evidence. *Journal of Economic Growth* 23:1, 41-78. [[Crossref](#)]
1043. John J. Chin. 2018. The Longest March: Why China's Democratization is Not Imminent. *Journal of Chinese Political Science* 23:1, 63-82. [[Crossref](#)]
1044. Ernesto R. Gantman, Marcelo P. Dabós. 2018. Does trade openness influence the real effective exchange rate? New evidence from panel time-series. *SERIEs* 9:1, 91-113. [[Crossref](#)]
1045. Jan Hajek, Roman Horvath. 2018. International spillovers of (un)conventional monetary policy: The effect of the ECB and the US Fed on non-euro EU countries. *Economic Systems* 42:1, 91-105. [[Crossref](#)]
1046. Andrew T. Young, Maria Y. Tackett. 2018. Globalization and the decline in labor shares: Exploring the relationship beyond trade and financial flows. *European Journal of Political Economy* 52, 18-35. [[Crossref](#)]
1047. Andre C. Vianna, Andre V. Mollick. 2018. Institutions: Key variable for economic development in Latin America. *Journal of Economics and Business* 96, 42-58. [[Crossref](#)]

1048. R. Galema, M. Koetter. 2018. Big fish in small banking ponds? Cost advantage and foreign affiliate presence. *Journal of International Money and Finance* **81**, 138-158. [[Crossref](#)]
1049. Michael Beckley, Yusaku Horiuchi, Jennifer M. Miller. 2018. AMERICA'S ROLE IN THE MAKING OF JAPAN'S ECONOMIC MIRACLE. *Journal of East Asian Studies* **18**:1, 1-21. [[Crossref](#)]
1050. Silke Uebelmesser, Matthias Huber, Severin Weingarten. 2018. The German Language Worldwide: a New Data Set on Language Learning. *CEifo Economic Studies* **64**:1, 103-121. [[Crossref](#)]
1051. Ching-mu Chen, Dao-Zhi Zeng. 2018. Mobile Capital, Variable Elasticity of Substitution, and Trade Liberalization. *Journal of Economic Geography* **18**:2, 461-494. [[Crossref](#)]
1052. Peter Fuleky, Luigi Ventura, Qianxue Zhao. 2018. Common correlated effects and international risk sharing. *International Finance* **21**:1, 55-70. [[Crossref](#)]
1053. Davide Fiaschi, Andrea Mario Lavezzi, Angela Parenti. 2018. Does EU cohesion policy work? Theory and evidence. *Journal of Regional Science* **58**:2, 386-423. [[Crossref](#)]
1054. Boris N. Nikolaev, Christopher J. Boudreaux, Leslie Palich. 2018. Cross-Country Determinants of Early-Stage Necessity and Opportunity-Motivated Entrepreneurship: Accounting for Model Uncertainty. *Journal of Small Business Management* **56**, 243-280. [[Crossref](#)]
1055. Nikolaos Charalampidis. 2018. The National Wealth-Income Ratio in Greece, 1974-2013. *Review of Income and Wealth* **64**:1, 83-104. [[Crossref](#)]
1056. Rabeea Sadaf, Judit Oláh, József Popp, Domicián Máté. 2018. An Investigation of the Influence of the Worldwide Governance and Competitiveness on Accounting Fraud Cases: A Cross-Country Perspective. *Sustainability* **10**:3, 588. [[Crossref](#)]
1057. Brad Sievers, R. Urbatsch. 2018. Endogenous borders and access to the sea. *Political Geography* **63**, 43-53. [[Crossref](#)]
1058. Hiroyuki Imai. 2018. China's rapid growth and real exchange rate appreciation: Measuring the Balassa-Samuelson effect. *Journal of Asian Economics* **54**, 39-52. [[Crossref](#)]
1059. Philipp Harms, Pierre-Guillaume Méon. 2018. Good and useless FDI: The growth effects of greenfield investment and mergers and acquisitions. *Review of International Economics* **26**:1, 37-59. [[Crossref](#)]
1060. Kwok Tong Soo. 2018. Country size and trade in intermediate and final goods. *The World Economy* **41**:2, 634-652. [[Crossref](#)]
1061. Giray Gozgor. 2018. Robustness of the KOF index of economic globalisation. *The World Economy* **41**:2, 414-430. [[Crossref](#)]
1062. Elsayed Mettwally Abd-Elkader. 2018. Trade Liberalization and Carbon Dioxide Emissions: A Pooled Mean Group Analysis. *International Journal of Trade, Economics and Finance* **9**:1, 1-7. [[Crossref](#)]
1063. . Back Matter: Appendices A and B 211-233. [[Crossref](#)]
1064. Glenn-Marie Lange, Quentin Wodon. Estimating the Wealth of Nations 25-41. [[Crossref](#)]
1065. Kirk Hamilton, Quentin Wodon, Diego Barrot, Ali Yedan. Human Capital and the Wealth of Nations: Global Estimates and Trends 115-133. [[Crossref](#)]
1066. Ada Nayihouba, Quentin Wodon. Gains in Human Capital Wealth: What Growth Models Tell Us 135-149. [[Crossref](#)]
1067. Glenn-Marie Lange, Quentin Wodon, Kevin Carey. Executive Summary 1-23. [[Crossref](#)]
1068. Babagana Mala Musti. 2018. Impact of Globalisation on Employment in Nigeria. *International Economic Journal* **32**:1, 43-52. [[Crossref](#)]
1069. Michael A. Clemens. 2018. Testing for Repugnance in Economic Transactions: Evidence from Guest Work in the Gulf. *The Journal of Legal Studies* **47**:S1, S5-S44. [[Crossref](#)]

1070. Alexander Bick, Nicola Fuchs-Schündeln, David Lagakos. 2018. How Do Hours Worked Vary with Income? Cross-Country Evidence and Implications. *American Economic Review* **108**:1, 170-199. [[Abstract](#)] [[View PDF article](#)] [[PDF with links](#)]
1071. Minhaj Mahmud, Keijiro Otsuka, Yasuyuki Sawada, Eiji Yamada. Development Transformation in Bangladesh: An Overview 3-26. [[Crossref](#)]
1072. Pavlos Gkasis. Greece and European Monetary Union: The Road to the Demise of the Greek Economy 93-110. [[Crossref](#)]
1073. Roseline Wanjiru, Karla Simone Prime. Institutions, Economic Growth and International Competitiveness: A Regional Study 99-124. [[Crossref](#)]
1074. Stephan Huber. Trade Patterns and Endogenous Institutions: Global Evidence 91-120. [[Crossref](#)]
1075. Enrica Di Stefano, Daniela Marconi. Growth Potential in Emerging Countries 43-57. [[Crossref](#)]
1076. Herman J. de Jong, Nuno Palma. Historical National Accounting 395-403. [[Crossref](#)]
1077. Pieter Woltjer. Frontier Analysis 417-424. [[Crossref](#)]
1078. Ettore Dorrucci. Sustainable Economic Growth in the Euro Area: The Need for a “Long View” and “Going Granular” 175-195. [[Crossref](#)]
1079. Ali Ari, Raif Cergibozan. Sustainable Growth in Turkey: The Role of Trade Openness, Financial Development, and Renewable Energy Use 435-455. [[Crossref](#)]
1080. Aviral K. Tiwari, Anabel Forte, Gonzalo Garcia-Donato, Angeliki N. Menegaki. Practical Issues on Energy-Growth Nexus Data and Variable Selection With Bayesian Analysis 187-227. [[Crossref](#)]
1081. Heli Arminen. Simultaneous Equations Modeling in the Energy-Growth Nexus 307-345. [[Crossref](#)]
1082. Piyusha Mutreja, B. Ravikumar, Michael Sposi. 2018. Capital goods trade, relative prices, and economic development. *Review of Economic Dynamics* **27**, 101-122. [[Crossref](#)]
1083. Iain Osgood. 2018. Globalizing the Supply Chain: Firm and Industrial Support for US Trade Agreements. *International Organization* **72**:2, 455-484. [[Crossref](#)]
1084. Philip Roessler, David Ohls. 2018. Self-Enforcing Power Sharing in Weak States. *International Organization* **72**:2, 423-454. [[Crossref](#)]
1085. Bronwyn H. Hall, Christian Helmers. 2018. The Impact of International Patent Systems: Evidence from Accession to the European Patent Convention. *SSRN Electronic Journal* . [[Crossref](#)]
1086. Yang Xu. 2018. Structural Change and the Skill Premium in a Global Economy. *SSRN Electronic Journal* . [[Crossref](#)]
1087. Andreas Beerli, Franziska Weiss, Fabrizio Zilibotti, Josef Zweimüller. 2018. Demand Forces of Technical Change: Evidence From the Chinese Manufacturing Industry. *SSRN Electronic Journal* . [[Crossref](#)]
1088. Lionel Nesta, Elena Verdolini, Francesco Vona. 2018. Threshold Policy Effects and Directed Technical Change in Energy Innovation. *SSRN Electronic Journal* . [[Crossref](#)]
1089. Ryan Murphy. 2018. Governance and the Dimensions of Autocracy. *SSRN Electronic Journal* . [[Crossref](#)]
1090. Rod Tyers, Yixiao Zhou. 2018. Deflation Forces and Inequality. *SSRN Electronic Journal* . [[Crossref](#)]
1091. Jong-Wha Lee. 2018. Convergence Success and the Middle-Income Trap. *SSRN Electronic Journal* . [[Crossref](#)]
1092. Mushtaq Malik, Tariq Masood. 2018. Economic Growth, Productivity and Convergence of West Asian and North African Countries. *SSRN Electronic Journal* . [[Crossref](#)]
1093. Joonkyung Ha, Sang-Hyop Lee. 2018. Population Aging and the Possibility of a Middle-Income Trap in Asia. *SSRN Electronic Journal* . [[Crossref](#)]

1094. Anna Stansbury, Lawrence H. Summers. 2018. Productivity and Pay: Is the Link Broken?. *SSRN Electronic Journal* . [[Crossref](#)]
1095. Travis Campbell, Daniele Tavani. 2018. Marx-Biased Technical Change and Income Distribution: A Panel Data Analysis. *SSRN Electronic Journal* . [[Crossref](#)]
1096. Thomas B. Pepinsky. 2018. The Return of the Single Country Study. *SSRN Electronic Journal* . [[Crossref](#)]
1097. Colin O'Reilly. 2018. Can War Foster Institutional Change?. *SSRN Electronic Journal* . [[Crossref](#)]
1098. Fabian Gaessler, Bronwyn H. Hall, Dietmar Harhoff. 2018. Should There Be Lower Taxes on Patent Income?. *SSRN Electronic Journal* . [[Crossref](#)]
1099. Matteo Coronese, Francesco Lamperti, Francesca Chiaromonte, Andrea Roventini. 2018. Natural Disaster Risk and the Distributional Dynamics of Damages. *SSRN Electronic Journal* . [[Crossref](#)]
1100. Christian Bjørnskov, Martin Rode. 2018. Regime Types and Regime Change: A New Dataset. *SSRN Electronic Journal* . [[Crossref](#)]
1101. Veridiana Nogueira. 2018. Skilled and Unskilled Labour: Are They Worth Their Weight in Growth?. *SSRN Electronic Journal* . [[Crossref](#)]
1102. Quoc Hung Nguyen. 2018. Financial Deepening in a Two-Sector Endogenous Growth Model with Productivity Heterogeneity. *SSRN Electronic Journal* . [[Crossref](#)]
1103. Karsten Müller. 2018. Credit Markets Around the World, 1910-2014. *SSRN Electronic Journal* . [[Crossref](#)]
1104. Andreas Fuchs, Angelika Müller. 2018. Democracy and Aid Donorship. *SSRN Electronic Journal* . [[Crossref](#)]
1105. Antonio Afonso, José Alves. 2018. Optimal Tax Structure for Consumption and Income Inequality: An Empirical Assessment. *SSRN Electronic Journal* . [[Crossref](#)]
1106. Chander Kant. 2018. South Asia/Frontier Long-Term Income Dynamics and Income-Health Relationships. *SSRN Electronic Journal* . [[Crossref](#)]
1107. Karol Szomolányi, Martin Lukacik, Adriana Lukacikova. 2018. Elasticity of Substitution in Post-Communist Economies. *SSRN Electronic Journal* . [[Crossref](#)]
1108. James Edward Mahon. 2018. Rentier States, International Finance, and Governance. *SSRN Electronic Journal* . [[Crossref](#)]
1109. Andrzej Cieslik, Aleksandra Parteka. 2018. Export Variety, Productivity, and Country Size in a Multi-good Ricardian Model of Export Diversification. *SSRN Electronic Journal* . [[Crossref](#)]
1110. Servaas Storm, Enno Schröder. 2018. Economic Growth and Carbon Emissions: The Road to 'Hothouse Earth' is Paved with Good Intentions. *SSRN Electronic Journal* . [[Crossref](#)]
1111. Pablo Ruiz N&aacute;poles. 2018. The Heckscher-Ohlin Theorem and the Mexican Economy 1980, 1990, 2003 and 2013. *SSRN Electronic Journal* . [[Crossref](#)]
1112. Valentin Lang, Marina Mendes Tavares. 2018. The Distribution of Gains from Globalization. *IMF Working Papers* **18**:54, 1. [[Crossref](#)]
1113. Lusine Lusinyan. 2018. Assessing the Impact of Structural Reforms Through a Supply-side Framework: The Case of Argentina. *IMF Working Papers* **18**:183, 1. [[Crossref](#)]
1114. Gabriele Ciminelli, Romain Duval, Davide Furceri. 2018. Employment Protection Deregulation and Labor Shares in Advanced Economies. *IMF Working Papers* **18**:186, 1. [[Crossref](#)]
1115. Kazuhiko Hayakawa, M. Hashem Pesaran, L. Vanessa Smith. 2018. Short T Dynamic Panel Data Models with Individual and Interactive Time Effects. *SSRN Electronic Journal* . [[Crossref](#)]
1116. Jamie Bologna Pavlik, Andrew T. Young. 2018. Medieval European Traditions in Representation and State Capacity Today. *SSRN Electronic Journal* . [[Crossref](#)]

1117. Igor Kirilyuk, Anna Kuznetsova, Oleg Senko. 2018. Data Mining in Institutional Economics Tasks. *EPJ Web of Conferences* **173**, 03013. [[Crossref](#)]
1118. Laura Alfaro, Alejandro Cuat, Harald Fadinger, Yanping Liu. 2018. The Real Exchange Rate, Innovation and Productivity. *SSRN Electronic Journal* . [[Crossref](#)]
1119. Rafael R. Guthmann. 2018. Estimating Growth Over the Long Run. *SSRN Electronic Journal* . [[Crossref](#)]
1120. Tobias Geiger. 2018. Continuous national gross domestic product (GDP) time series for 195 countries: past observations (1850–2005) harmonized with future projections according to the Shared Socio-economic Pathways (2006–2100). *Earth System Science Data* **10**:2, 847–856. [[Crossref](#)]
1121. César Calderón, Megumi Kubota. 2018. Does higher openness cause more real exchange rate volatility?. *Journal of International Economics* **110**, 176–204. [[Crossref](#)]
1122. Chander Kant. 2018. Privatization and Growth: Natural Experiments of European Economies in Transition. *SSRN Electronic Journal* **127**. . [[Crossref](#)]
1123. Chander Kant. 2018. Where Is the African Growth Miracle?. *SSRN Electronic Journal* **94**. . [[Crossref](#)]
1124. Eiji Ogawa, Makoto Muto. 2017. Declining Japanese Yen in the Changing International Monetary System. *East Asian Economic Review* **21**:4, 317–342. [[Crossref](#)]
1125. Veronika Nálepová. 2017. Affects Corporate Taxation Economic Growth? - Dynamic Approach for OECD Countries. *European Journal of Business Science and Technology* **3**:2, 132–147. [[Crossref](#)]
1126. Nelson Marconi, Marco Brancher. 2017. A POLÍTICA ECONÔMICA DO NOVO DESENVOLVIMENTISMO. *Revista de Economia Contemporânea* **21**:2. . [[Crossref](#)]
1127. Roberto Ricciuti, Domenico Rossignoli. 2017. Bridging Economics and International Relations to Understand State Capacity and War in Sub-Saharan Africa. *Peace Economics, Peace Science and Public Policy* **23**:4. . [[Crossref](#)]
1128. Martin Falk, Eva Hagsten. 2017. Measuring the impact of the European Capital of Culture programme on overnight stays: evidence for the last two decades. *European Planning Studies* **25**:12, 2175–2191. [[Crossref](#)]
1129. Lee E. Ohanian. 2017. The Great Recession in the Shadow of the Great Depression: A Review Essay on Hall of Mirrors: The Great Depression, the Great Recession, and the Uses and Misuses of History, by Barry Eichengreen. *Journal of Economic Literature* **55**:4, 1583–1601. [[Abstract](#)] [[View PDF article](#)] [[PDF with links](#)]
1130. Giray Gozgor. 2017. Does trade matter for carbon emissions in OECD countries? Evidence from a new trade openness measure. *Environmental Science and Pollution Research* **24**:36, 27813–27821. [[Crossref](#)]
1131. Keijiro Otsuka, Yuki Higuchi, Tetsushi Sonobe. 2017. Middle-income traps in East Asia: An inquiry into causes for slowdown in income growth. *China Economic Review* **46**, S3–S16. [[Crossref](#)]
1132. Tannista Banerjee, Arnab Nayak. 2017. Multinational investments and product sophistication. *Economics Letters* **161**, 157–163. [[Crossref](#)]
1133. David I. Stern, Reyer Gerlagh, Paul J. Burke. 2017. Modeling the emissions–income relationship using long-run growth rates. *Environment and Development Economics* **22**:6, 699–724. [[Crossref](#)]
1134. Yin-Wong Cheung, Menzie Chinn, Xin Nong. 2017. Estimating currency misalignment using the Penn effect: It is not as simple as it looks. *International Finance* **20**:3, 222–242. [[Crossref](#)]
1135. Daniele Tavani, Luca Zamparelli. 2017. ENDOGENOUS TECHNICAL CHANGE IN ALTERNATIVE THEORIES OF GROWTH AND DISTRIBUTION. *Journal of Economic Surveys* **31**:5, 1272–1303. [[Crossref](#)]
1136. Giray Gozgor, Priya Ranjan. 2017. Globalisation, inequality and redistribution: Theory and evidence. *The World Economy* **40**:12, 2704–2751. [[Crossref](#)]



1137. Elina Pradhan, Elina M. Suzuki, Sebastián Martínez, Marco Schäferhoff, Dean T. Jamison. The Effects of Education Quantity and Quality on Child and Adult Mortality: Their Magnitude and Their Value 423-440. [[Crossref](#)]
1138. Jerg Gutmann, Katharina Pfaff, Stefan Voigt. 2017. Banking crises and human rights. *Applied Economics Letters* **24**:19, 1374-1377. [[Crossref](#)]
1139. . Foreign Exchange Models and Prices 195-225. [[Crossref](#)]
1140. Ryota Nakatani. 2017. The Effects of Productivity Shocks, Financial Shocks, and Monetary Policy on Exchange Rates: An Application of the Currency Crisis Model and Implications for Emerging Market Crises. *Emerging Markets Finance and Trade* **53**:11, 2545-2561. [[Crossref](#)]
1141. Ana Hidalgo-Cabrillana, Zoë Kuehn, Cristina Lopez-Mayan. 2017. Development accounting using PIAAC data. *SERIEs* **8**:4, 373-399. [[Crossref](#)]
1142. Adam Chilton, Mila Versteeg. 2017. Rights without Resources: The Impact of Constitutional Social Rights on Social Spending. *The Journal of Law and Economics* **60**:4, 713-748. [[Crossref](#)]
1143. Michael Bratt. 2017. Estimating the bilateral impact of nontariff measures on trade. *Review of International Economics* **25**:5, 1105-1129. [[Crossref](#)]
1144. Ka Ho Mok, Stefan Kühner, Genghua Huang. 2017. The Productivist Construction of Selective Welfare Pragmatism in China. *Social Policy & Administration* **51**:6, 876-897. [[Crossref](#)]
1145. JAMES A. EDMONDS, ROBERT LINK, STEPHANIE T. WALDHOF, RYNA CUI. 2017. A GLOBAL FOOD DEMAND MODEL FOR THE ASSESSMENT OF COMPLEX HUMAN-EARTH SYSTEMS. *Climate Change Economics* **08**:04, 1750012. [[Crossref](#)]
1146. Pablo D. Fajgelbaum, Edouard Schaal, Mathieu Taschereau-Dumouchel. 2017. Uncertainty Traps\*. *The Quarterly Journal of Economics* **132**:4, 1641-1692. [[Crossref](#)]
1147. Jonathan Heathcote, Kjetil Storesletten, Giovanni L. Violante. 2017. Optimal Tax Progressivity: An Analytical Framework\*. *The Quarterly Journal of Economics* **132**:4, 1693-1754. [[Crossref](#)]
1148. Victor Ortego-Martí. 2017. Loss of skill during unemployment and TFP differences across countries. *European Economic Review* **100**, 215-235. [[Crossref](#)]
1149. 2017. Comments by Kozo Kiyota, on The Global Productivity Slump: Common and Country-Specific Factors. *Asian Economic Papers* **16**:3, 44-45. [[Crossref](#)]
1150. Mark Dinuccio. State Capacity and Economic Development **11**, . [[Crossref](#)]
1151. Daniel Lederman, Justin T. Lesniak. Back Matter: Appendix A 107-116. [[Crossref](#)]
1152. Daniel Lederman, Justin T. Lesniak. Implications for Economic Outcomes 43-76. [[Crossref](#)]
1153. João Paulo Cerdeira Bento, Nina Szczygiel, Victor Moutinho. 2017. Fossil fuel power generation and economic growth in Poland. *Energy Sources, Part B: Economics, Planning, and Policy* **12**:10, 930-935. [[Crossref](#)]
1154. Elizabeth A. Moorhouse. 2017. The Many Dimensions of Gender Equality and Their Impact on Economic Growth. *Forum for Social Economics* **46**:4, 350-370. [[Crossref](#)]
1155. Dominika Kunertova. 2017. One measure cannot trump it all: lessons from NATO's early burden-sharing debates. *European Security* **26**:4, 552-574. [[Crossref](#)]
1156. Jean-Philippe Boussemart, Hervé Leleu, Zhiyang Shen. 2017. Worldwide carbon shadow prices during 1990-2011. *Energy Policy* **109**, 288-296. [[Crossref](#)]
1157. Zheming Yan, Keru Du, Zhiming Yang, Min Deng. 2017. Convergence or divergence? Understanding the global development trend of low-carbon technologies. *Energy Policy* **109**, 499-509. [[Crossref](#)]
1158. Ingvald Almås, Mandeep Grewal, Marielle Hvide, Serhat Ugurlu. 2017. The PPP approach revisited: A study of RMB valuation against the USD. *Journal of International Money and Finance* **77**, 18-38. [[Crossref](#)]

1159. Zheng Fang, Yang Chen. 2017. Human capital and energy in economic growth – Evidence from Chinese provincial data. *Energy Economics* **68**, 340-358. [[Crossref](#)]
1160. Rachel C. Reyes, Manfred Lenzen, Joy Murray. 2017. Better Global Assessment of Worker Inequality: Comment on “The Employment Footprints of Nations”. *Journal of Industrial Ecology* **21**:5, 1188-1197. [[Crossref](#)]
1161. Angelica Sbardella, Emanuele Pugliese, Luciano Pietronero. 2017. Economic development and wage inequality: A complex system analysis. *PLOS ONE* **12**:9, e0182774. [[Crossref](#)]
1162. Jong-Wha Lee. 2017. China's economic growth and convergence. *The World Economy* **1**. . [[Crossref](#)]
1163. Lindsey A. O'Rourke. 2017. Covert calamities: American-backed covert regime changes and civil war. *Canadian Foreign Policy Journal* **23**:3, 232-245. [[Crossref](#)]
1164. Seema Jayachandran, Rohini Pande. 2017. Why Are Indian Children So Short? The Role of Birth Order and Son Preference. *American Economic Review* **107**:9, 2600-2629. [[Abstract](#)] [[View PDF article](#)] [[PDF with links](#)]
1165. Katharina Erhardt. 2017. On home market effects and firm heterogeneity. *European Economic Review* **98**, 316-340. [[Crossref](#)]
1166. Ingvild Almås, Anders Kjelsrud. 2017. Rags and Riches: Relative Prices, Non-Homothetic Preferences, and Inequality in India. *World Development* **97**, 102-121. [[Crossref](#)]
1167. Colin O'Reilly, Ryan H. Murphy. 2017. Exogenous Resource Shocks and Economic Freedom. *Comparative Economic Studies* **59**:3, 243-260. [[Crossref](#)]
1168. Luisa Alamá-Sabater, Benedikt Heid, Eduardo Jiménez-Fernández, Laura Márquez-Ramos. 2017. FDI in Space Revisited: The Role of Spillovers on Foreign Direct Investment within the European Union. *Growth and Change* **48**:3, 390-408. [[Crossref](#)]
1169. Minh Tam Schlosky, Andrew Young. 2017. Can foreign aid motivate institutional reform? An evaluation of the HIPC Initiative. *Journal of Entrepreneurship and Public Policy* **6**:2, 242-258. [[Crossref](#)]
1170. Pál Czeglédi. 2017. Productivity, institutions, and market beliefs: three entrepreneurial interpretations. *Journal of Entrepreneurship and Public Policy* **6**:2, 164-180. [[Crossref](#)]
1171. Benjamin Hampf, Jens J. Krüger. 2017. Estimating the bias in technical change: A nonparametric approach. *Economics Letters* **157**, 88-91. [[Crossref](#)]
1172. Giray Gözgör, Muhlis Can. 2017. Causal Linkages among the Product Diversification of Exports, Economic Globalization and Economic Growth. *Review of Development Economics* **21**:3, 888-908. [[Crossref](#)]
1173. Douglas Ncube. 2017. Agricultural Distortions and Economic Growth in Southern Africa: Evidence from Mozambique, Zambia and Zimbabwe (1970-2011). *The Open Agriculture Journal* **11**:1, 35-45. [[Crossref](#)]
1174. Rik W. Hafer. Female Entrepreneurship and IQ 187-204. [[Crossref](#)]
1175. Ayesha Ashraf, Dierk Herzer, Peter Nunnenkamp. 2017. Greenfield FDI, cross-border M&As, and government size. *The Journal of International Trade & Economic Development* **26**:5, 566-584. [[Crossref](#)]
1176. Carl-Johan Dalgaard, Henrik Hansen. 2017. The Return to Foreign Aid. *The Journal of Development Studies* **53**:7, 998-1018. [[Crossref](#)]
1177. Joan B. Anderson, James Gerber. 2017. The US-Mexico Border Human Development Index, 1990–2010. *Journal of Borderlands Studies* **32**:3, 275-288. [[Crossref](#)]
1178. Dierk Herzer. 2017. Refugee Immigration and Total Factor Productivity. *International Economic Journal* **31**:3, 390-414. [[Crossref](#)]

1179. Ünal Töngür, Adem Yavuz Elveren. 2017. The nexus of economic growth, military expenditures, and income inequality. *Quality & Quantity* 51:4, 1821-1842. [[Crossref](#)]
1180. Zhiyang Shen, Jean-Philippe Boussemart, Hervé Leleu. 2017. Aggregate green productivity growth in OECD's countries. *International Journal of Production Economics* 189, 30-39. [[Crossref](#)]
1181. Rupa Duttagupta, Futoshi Narita. 2017. Emerging and developing economies: Entering a rough patch or protracted low gear?. *Journal of Policy Modeling* 39:4, 680-698. [[Crossref](#)]
1182. Marinko ŠKARE, Damian ŠKARE. 2017. IS THE GREAT DECOUPLING REAL?. *Journal of Business Economics and Management* 18:3, 451-467. [[Crossref](#)]
1183. Gazi Ashir Uddin, Mohammad Salahuddin, Khorshed Alam, Jeff Gow. 2017. Ecological footprint and real income: Panel data evidence from the 27 highest emitting countries. *Ecological Indicators* 77, 166-175. [[Crossref](#)]
1184. Mark Kelly. 2017. Health capital accumulation, health insurance, and aggregate outcomes: A neoclassical approach. *Journal of Macroeconomics* 52, 1-22. [[Crossref](#)]
1185. Mahyudin Ahmad. 2017. Economic Freedom and Income Inequality: Does Political Regime Matter?. *Economies* 5:2, 18. [[Crossref](#)]
1186. Malgorzata Mikucka, Francesco Sarracino, Joshua K. Dubrow. 2017. When Does Economic Growth Improve Life Satisfaction? Multilevel Analysis of the Roles of Social Trust and Income Inequality in 46 Countries, 1981-2012. *World Development* 93, 447-459. [[Crossref](#)]
1187. Mahesh Karra, David Canning, Joshua Wilde. 2017. The Effect of Fertility Decline on Economic Growth in Africa: A Macrosimulation Model. *Population and Development Review* 43, 237-263. [[Crossref](#)]
1188. Joseph Dieleman, Madeline Campbell, Abigail Chapin, Erika Eldrenkamp, Victoria Y Fan, Annie Haakenstad, Jennifer Kates, Yingying Liu, Taylor Matyas, Angela Micah, Alex Reynolds, Nafis Sadat, Matthew T Schneider, Reed Sorensen, Tim Evans, David Evans, Christoph Kurowski, Ajay Tandon, Kaja M Abbas, Semaw Ferede Abera, Aliasghar Ahmad Kiadaliri, Kedir Yimam Ahmed, Muktar Beshir Ahmed, Khurshid Alam, Reza Alizadeh-Navaei, Ala'a Alkerwi, Erfan Amini, Walid Ammar, Stephen Marc Amrock, Carl Abelardo T Antonio, Tesfay Mehari Atey, Leticia Avila-Burgos, Ashish Awasthi, Aleksandra Barac, Oscar Alberto Bernal, Addisu Shunu Beyene, Tariku Jibat Beyene, Charles Birungi, Habtamu Mellie Bizuayehu, Nicholas J K Breitborde, Lucero Cahuana-Hurtado, Ruben Estanislao Castro, Ferran Catalia-Lopez, Koustuv Dalal, Lalit Dandona, Rakhi Dandona, Pieter de Jager, Samath D Dharmaratne, Manisha Dubey, Carla Sofia e Sa Farinha, Andre Faro, Andrea B Feigl, Florian Fischer, Joseph Robert Anderson Fitchett, Nataliya Foigt, Ababi Zergaw Giref, Rahul Gupta, Samer Hamidi, Hilda L Harb, Simon I Hay, Delia Hendrie, Masako Horino, Mikk Jürisson, Mihajlo B Jakovljevic, Mehdi Javanbakht, Denny John, Jost B Jonas, Seyed M. Karimi, Young-Ho Khang, Jagdish Khubchandani, Yun Jin Kim, Jonas M Kinge, Kristopher J Krohn, G Anil Kumar, Hassan Magdy Abd El Razek, Mohammed Magdy Abd El Razek, Azeem Majeed, Reza Malekzadeh, Felix Masiye, Toni Meier, Atte Meretoja, Ted R Miller, Erkin M Mirrakhimov, Shafiu Mohammed, Vinay Nangia, Stefano Olgiati, Abdalla Sidahmed Osman, Mayowa O Owolabi, Tejas Patel, Angel J Paternina Caicedo, David M Pereira, Julian Perelman, Suzanne Polinder, Anwar Rafay, Vafa Rahimi-Movaghar, Rajesh Kumar Rai, Usha Ram, Chhabi Lal Ranabhat, Hirbo Shore Roba, Joseph Salama, Miloje Savic, Sadaf G Sepanlou, Mark G Shrimme, Roberto Tchao Talongwa, Braden J Te Ao, Fabrizio Tediosi, Azeb Gebresilassie Tesema, Alan J Thomson, Ruoyan Tobe-Gai, Roman Topor-Madry, Eduardo A Undurraga, Tommi Vasankari, Francesco S Violante, Andrea Werdecker, Tissa Wijeratne, Gelin Xu, Naohiro Yonemoto, Mustafa Z Younis, Chuanhua Yu, Zoubida Zaidi, Maysaa El Sayed Zaki, Christopher J L Murray. 2017. Evolution and patterns of global health financing 1995-2014: development assistance for health, and government, prepaid private, and out-of-pocket health spending in 184 countries. *The Lancet* 389:10083, 1981-2004. [[Crossref](#)]

1189. Joseph L Dieleman, Madeline Campbell, Abigail Chapin, Erika Eldrenkamp, Victoria Y Fan, Annie Haakenstad, Jennifer Kates, Zhiyin Li, Taylor Matyas, Angela Micah, Alex Reynolds, Nafis Sadat, Matthew T Schneider, Reed Sorensen, Kaja M Abbas, Semaw Ferede Abera, Aliasghar Ahmad Kiadaliri, Muktar Beshir Ahmed, Khurshid Alam, Reza Alizadeh-Navaei, Ala'a Alkerwi, Erfan Amini, Walid Ammar, Carl Abelardo T Antonio, Tesfay Mehari Atey, Leticia Avila-Burgos, Ashish Awasthi, Aleksandra Barac, Tezera Moshago Berheto, Addisu Shunu Beyene, Tariku Jibat Beyene, Charles Birungi, Habtamu Mellie Bizuayehu, Nicholas J K Breitborde, Lucero Cahuana-Hurtado, Ruben Estanislao Castro, Ferran Catalia-Lopez, Koustuv Dalal, Lalit Dandona, Rakhi Dandona, Samath D Dharmaratne, Manisha Dubey, Andé Faro, Andrea B Feigl, Florian Fischer, Joseph R Anderson Fitchett, Nataliya Foigt, Ababi Zergaw Giref, Rahul Gupta, Samer Hamidi, Hilda L Harb, Simon I Hay, Delia Hendrie, Masako Horino, Mikk Jürisson, Mihajlo B Jakovljevic, Mehdi Javanbakht, Denny John, Jost B Jonas, Seyed M Karimi, Young-Ho Khang, Jagdish Khubchandani, Yun Jin Kim, Jonas M Kinge, Kristopher J Krohn, G Anil Kumar, Ricky Leung, Hassan Magdy Abd El Razek, Mohammed Magdy Abd El Razek, Azeem Majeed, Reza Malekzadeh, Deborah Carvalho Malta, Atte Meretoja, Ted R Miller, Erkin M Mirrakhimov, Shafiu Mohammed, Gedefaw Molla, Vinay Nangia, Stefano Olgiati, Mayowa O Owolabi, Tejas Patel, Angel J Paternina Caicedo, David M Pereira, Julian Perelman, Suzanne Polinder, Anwar Rafay, Vafa Rahimi-Movaghar, Rajesh Kumar Rai, Usha Ram, Chhabi Lal Ranabhat, Hirbo Shore Roba, Miloje Savic, Sadaf G Sepanlou, Braden J Te Ao, Azeb Gebresilassie Tesema, Alan J Thomson, Ruoyan Tobe-Gai, Roman Topor-Madry, Eduardo A Undurraga, Veronica Vargas, Tommi Vasankari, Francesco S Violante, Tissa Wijeratne, Gelin Xu, Naohiro Yonemoto, Mustafa Z Younis, Chuanhua Yu, Zoubida Zaidi, Maysaa El Sayed Zaki, Christopher J L Murray. 2017. Future and potential spending on health 2015–40: development assistance for health, and government, prepaid private, and out-of-pocket health spending in 184 countries. *The Lancet* **389**:10083, 2005-2030. [[Crossref](#)]
1190. Hikaru Komatsu, Jeremy Rappleye. 2017. A new global policy regime founded on invalid statistics? Hanushek, Woessmann, PISA, and economic growth. *Comparative Education* **53**:2, 166-191. [[Crossref](#)]
1191. Melanie Krause. 2017. The Millennium Peak in Club Convergence: A New Look at Distributional Changes in The Wealth of Nations. *Journal of Applied Econometrics* **32**:3, 621-642. [[Crossref](#)]
1192. Matteo Cervellati, Uwe Sunde, Klaus F. Zimmermann. 2017. Demographic dynamics and long-run development: insights for the secular stagnation debate. *Journal of Population Economics* **30**:2, 401-432. [[Crossref](#)]
1193. David I. Stern. 2017. The environmental Kuznets curve after 25 years. *Journal of Bioeconomics* **19**:1, 7-28. [[Crossref](#)]
1194. Shiu-Sheng Chen. 2017. Exchange rate undervaluation and R&D activity. *Journal of International Money and Finance* **72**, 148-160. [[Crossref](#)]
1195. Robert Inklaar, Addisu A. Lashitew, Marcel P. Timmer. 2017. THE ROLE OF RESOURCE MISALLOCATION IN CROSS-COUNTRY DIFFERENCES IN MANUFACTURING PRODUCTIVITY. *Macroeconomic Dynamics* **21**:3, 733-756. [[Crossref](#)]
1196. Erik Meyersson. 2017. Pious populists at the gate. *Economics of Transition* **25**:2, 271-312. [[Crossref](#)]
1197. Nelson Marconi. 2017. O papel dos preços macroeconômicos na crise e na recuperação. *Estudos Avançados* **31**:89, 97-109. [[Crossref](#)]
1198. Zheming Yan, Lan Yi, Kerui Du, Zhiming Yang. 2017. Impacts of Low-Carbon Innovation and Its Heterogeneous Components on CO2 Emissions. *Sustainability* **9**:4, 548. [[Crossref](#)]
1199. Dierk Herzer. 2017. Foreign direct investment and total factor productivity in Bolivia. *Applied Economics Letters* **24**:6, 399-403. [[Crossref](#)]

1200. Rodrigo Adao, Arnaud Costinot, Dave Donaldson. 2017. Nonparametric Counterfactual Predictions in Neoclassical Models of International Trade. *American Economic Review* **107**:3, 633-689. [[Abstract](#)] [[View PDF article](#)] [[PDF with links](#)]
1201. Felix Ward. 2017. Spotting the Danger Zone: Forecasting Financial Crises With Classification Tree Ensembles and Many Predictors. *Journal of Applied Econometrics* **32**:2, 359-378. [[Crossref](#)]
1202. Jens J. Krüger. 2017. Revisiting the world technology frontier: a directional distance function approach. *Journal of Economic Growth* **22**:1, 67-95. [[Crossref](#)]
1203. R.W. Hafer. 2017. New estimates on the relationship between IQ, economic growth and welfare. *Intelligence* **61**, 92-101. [[Crossref](#)]
1204. Cesar M. Rodriguez. 2017. The growth effects of financial openness and exchange rates. *International Review of Economics & Finance* **48**, 492-512. [[Crossref](#)]
1205. Alexandre Dmitriev. 2017. Composite habits and international transmission of business cycles. *Journal of Economic Dynamics and Control* **76**, 1-34. [[Crossref](#)]
1206. Tatsuro Iwaisako, Hitoshi Tanaka. 2017. Product cycles and growth cycles. *Journal of International Economics* **105**, 22-40. [[Crossref](#)]
1207. William R. Hauk. 2017. Endogeneity bias and growth regressions. *Journal of Macroeconomics* **51**, 143-161. [[Crossref](#)]
1208. Tiago Neves Sequeira, Marcelo Santos, Alexandra Ferreira-Lopes. 2017. Income Inequality, TFP, and Human Capital. *Economic Record* **93**:300, 89-111. [[Crossref](#)]
1209. Jiri Sejkora, Ondrej Sankot. 2017. Comparative advantage, economic structure and growth: The case of Senegal. *South African Journal of Economic and Management Sciences* **20**:1. . [[Crossref](#)]
1210. . The State of Development and Shared Prosperity in OIC Countries 41-55. [[Crossref](#)]
1211. E. Vinokurov, M. Demidenko, D. Korshunov. 2017. Potential costs and benefits of monetary integration in the Eurasian Economic Union. *Voprosy Ekonomiki* :2, 75-96. [[Crossref](#)]
1212. Shahram Amini, Michele Battisti, Christopher F. Parmeter. 2017. Decomposing changes in the conditional variance of GDP over time. *Economic Modelling* **61**, 376-387. [[Crossref](#)]
1213. Javier Hidalgo, Marcia Schafgans. 2017. Inference and testing breaks in large dynamic panels with strong cross sectional dependence. *Journal of Econometrics* **196**:2, 259-274. [[Crossref](#)]
1214. Vanesa Jordá, José M. Alonso. 2017. New Estimates on Educational Attainment Using a Continuous Approach (1970–2010). *World Development* **90**, 281-293. [[Crossref](#)]
1215. . Governance for Development: The Challenges 39-49. [[Crossref](#)]
1216. . Governance for Growth 137-165. [[Crossref](#)]
1217. . Overview: World Development Report 2017: Governance and the Law 2-37. [[Crossref](#)]
1218. Emanuele Pugliese, Guido L. Chiarotti, Andrea Zaccaria, Luciano Pietronero. 2017. Complex Economies Have a Lateral Escape from the Poverty Trap. *PLOS ONE* **12**:1, e0168540. [[Crossref](#)]
1219. George E. Halkos, Epameinondas A. Paizanos. 2017. The channels of the effect of government expenditure on the environment: evidence using dynamic panel data. *Journal of Environmental Planning and Management* **60**:1, 135-157. [[Crossref](#)]
1220. Angus Deaton, Bettina Aten. 2017. Trying to Understand the PPPs in ICP 2011: Why Are the Results So Different?. *American Economic Journal: Macroeconomics* **9**:1, 243-264. [[Abstract](#)] [[View PDF article](#)] [[PDF with links](#)]
1221. Robert Inklaar, D.S. Prasada Rao. 2017. Cross-Country Income Levels over Time: Did the Developing World Suddenly Become Much Richer?. *American Economic Journal: Macroeconomics* **9**:1, 265-290. [[Abstract](#)] [[View PDF article](#)] [[PDF with links](#)]

1222. Thomas Apolte, Helena Helfer. The Role of Democracy in a Social Market Economy 65-81. [[Crossref](#)]
1223. Zeki Kartal, Aida Zhumasheva, Hakan Acaroglu. The Effect of Human Capital on Economic Growth: A Time Series Analysis for Turkey 175-191. [[Crossref](#)]
1224. Petar Stankov. Introduction 1-8. [[Crossref](#)]
1225. Ali Ari, Raif Cergibozan. Sustainable Growth in Turkey: The Role of Trade Openness, Financial Development, and Renewable Energy Use 1-21. [[Crossref](#)]
1226. Fentahun Baylie. Testing the Balassa Hypothesis in Low- and Middle-Income Countries 253-287. [[Crossref](#)]
1227. Alam Khan, Zarinah Yusof. 2017. Trade-Terrorist Evaluation Index (TTEi). *Quality & Quantity* **51**:1, 365-375. [[Crossref](#)]
1228. Marta Bengoa, Valeriano Martínez-San Román, Patricio Pérez. 2017. Do R&D activities matter for productivity? A regional spatial approach assessing the role of human and social capital. *Economic Modelling* **60**, 448-461. [[Crossref](#)]
1229. Piero Esposito. 2017. Trade creation, trade diversion and imbalances in the EMU. *Economic Modelling* **60**, 462-472. [[Crossref](#)]
1230. Rainer Kotschy, Uwe Sunde. 2017. Democracy, inequality, and institutional quality. *European Economic Review* **91**, 209-228. [[Crossref](#)]
1231. Tomasz Świącki. 2017. Intersectoral distortions and the welfare gains from trade. *Journal of International Economics* **104**, 138-156. [[Crossref](#)]
1232. Cosimo Beverelli, Matteo Fiorini, Bernard Hoekman. 2017. Services trade policy and manufacturing productivity: The role of institutions. *Journal of International Economics* **104**, 166-182. [[Crossref](#)]
1233. Jenifer Whitten-Woodring, Douglas A. Van Belle. 2017. The Correlates of Media Freedom: An Introduction of the Global Media Freedom Dataset. *Political Science Research and Methods* **5**:1, 179-188. [[Crossref](#)]
1234. Azura Othman, Norhanim Mat Sari, Syed Othman Alhabshi, Abbas Mirakhor. Monetary Policy and Islamic Finance: Malaysia 175-237. [[Crossref](#)]
1235. Julia Bird, Piero Monteburno, Tanner Regan. 2017. Life in a slum: understanding living conditions in Nairobi's slums across time and space. *Oxford Review of Economic Policy* **33**:3, 496-520. [[Crossref](#)]
1236. Yasuyuki Sawada. 2017. Disasters, Household Decisions, and Insurance Mechanisms: A Review of Evidence and a Case Study from a Developing Country in Asia. *Asian Economic Policy Review* **12**:1, 18-40. [[Crossref](#)]
1237. John Gibson, Felix Rioja. 2017. PUBLIC INFRASTRUCTURE MAINTENANCE AND THE DISTRIBUTION OF WEALTH. *Economic Inquiry* **55**:1, 175-186. [[Crossref](#)]
1238. Stefan Voigt. 2017. What Makes Prosecutors Independent? - Analyzing the Determinants of the Independence of Prosecutors. *SSRN Electronic Journal* . [[Crossref](#)]
1239. Zoltan J. Acs, Saul Estrin, Tomasz Mickiewicz, László Szerb. 2017. Institutions, Entrepreneurship and Growth: The Role of National Entrepreneurial Ecosystems. *SSRN Electronic Journal* . [[Crossref](#)]
1240. kos Dombi, Theodoris Grigoriadis. 2017. Ancestry, Diversity & Finance: Evidence from Transition Economies. *SSRN Electronic Journal* . [[Crossref](#)]
1241. Adam S. Chilton, Eric A. Posner. 2017. Why Countries Sign Bilateral Labor Agreements. *SSRN Electronic Journal* . [[Crossref](#)]
1242. Ha Thi Thanh Doan, Guanghua Wan. 2017. Globalization and the Labor Share in National Income. *SSRN Electronic Journal* . [[Crossref](#)]



1243. Stephan Huber. 2017. Labor Market Rigidity and the Factor Content of Disaggregated Trade Patterns. *SSRN Electronic Journal* . [[Crossref](#)]
1244. Amanda M. Michaud, Jacek Rothert. 2017. Redistributive Fiscal Policies and Business Cycles in Emerging Economies. *SSRN Electronic Journal* . [[Crossref](#)]
1245. Krzysztof Waaniewski. 2017. Financial Equilibrium in the Presence of Technological Change. *SSRN Electronic Journal* . [[Crossref](#)]
1246. Valerie Anne Mercer-Blackman, Mahinthan Mariasingham. 2017. Using InputOutput Analysis Framework to Explain Economic Diversification and Structural Transformation in Bangladesh. *SSRN Electronic Journal* . [[Crossref](#)]
1247. Ana Hidalgo Cabrillana, Zoe Kuehn, Cristina Lopez-Mayan. 2017. Development Accounting Using PIAAC Data. *SSRN Electronic Journal* . [[Crossref](#)]
1248. Alok Johri, Md Mahbubur Rahman. 2017. The Rise and Fall of India's Relative Investment Price: A Tale of Policy Error and Reform. *SSRN Electronic Journal* . [[Crossref](#)]
1249. John Schoeneman, Boliang Zhu, Bruce A. Desmarais. 2017. The Network of Foreign Direct Investment Flows: Theory and Empirical Analysis. *SSRN Electronic Journal* . [[Crossref](#)]
1250. Michael Plouffe. 2017. The Political Economy of Institutional Quality and Monetary Policy. *SSRN Electronic Journal* . [[Crossref](#)]
1251. Evan W. Anderson, William A. Brock. 2017. Logarithmic Depreciation. *SSRN Electronic Journal* . [[Crossref](#)]
1252. Vishesh Agarwal, Sadia Afrin, Robert V. Breunig, Samuel Weldeegzie, Tong Zhang. 2017. Nationalism and Economic Openness: The Cross-Country Evidence Revisited. *SSRN Electronic Journal* . [[Crossref](#)]
1253. Krzysztof Waaniewski. 2017. Technological Change As Intelligent, Energy-Maximizing Adaptation. *SSRN Electronic Journal* . [[Crossref](#)]
1254. Matthias Busse, Ceren Erdogan, Henning MMhlen. 2017. Structural Transformation and Its Relevance for Economic Growth in Sub-Saharan Africa. *SSRN Electronic Journal* . [[Crossref](#)]
1255. Yixiao Zhou, Rod Tyers. 2017. Automation and Inequality in China. *SSRN Electronic Journal* . [[Crossref](#)]
1256. Alessandro Borin, Virginia Di Nino, Michele Mancini, Massimo Sbracia. 2017. The Cyclicity of the Income Elasticity of Trade. *SSRN Electronic Journal* . [[Crossref](#)]
1257. Franziska K. Kruse, Wolfgang Maennig. 2017. The Future Development of World Records. *SSRN Electronic Journal* . [[Crossref](#)]
1258. Jerg Gutmann, Stefan Voigt. 2017. The Heterogeneous Effects of Natural Disasters on Human Rights. *SSRN Electronic Journal* . [[Crossref](#)]
1259. Krzysztof Waaniewski. 2017. Settlement by Energy Can Renewable Energies Sustain Our Civilisation?. *SSRN Electronic Journal* . [[Crossref](#)]
1260. Erin Hye-Won Kim, Changjun Lee. 2017. Does Working Long Hours Cause Marital Dissolution? Evidence from the Reduction in South Korea's Workweek Standard. *SSRN Electronic Journal* . [[Crossref](#)]
1261. Zoltan J. Acs, Saul Estrin, Tomasz Mickiewicz, LLszll Szerb. 2017. Entrepreneurship, Institutions and Productivity Growth: A Puzzle. *SSRN Electronic Journal* . [[Crossref](#)]
1262. Rodolfo G. Campos. 2017. International Migration Pressures in the Long Run. *SSRN Electronic Journal* . [[Crossref](#)]
1263. Rod Tyers, Yixiao Zhou. 2017. Automation and Inequality with Taxes and Transfers. *SSRN Electronic Journal* . [[Crossref](#)]

1264. Daryna Grechyna. 2017. Firm Size, Bank Size, and Financial Development. *SSRN Electronic Journal* . [[Crossref](#)]
1265. Krzysztof Waaniewski. 2017. Technological Change as Monetary a Phenomenon. *SSRN Electronic Journal* . [[Crossref](#)]
1266. Eiji Ogawa, Makoto Muto. 2017. Declining Japanese Yen in the Changing International Monetary System. *SSRN Electronic Journal* . [[Crossref](#)]
1267. Jong-il You. 2017. The Agricultural Productivity Gap: A New Look at the Measurement Problem. *SSRN Electronic Journal* . [[Crossref](#)]
1268. Wojtek Paczos, Kirill Shakhnov. 2017. Sovereign Debt Issuance and Selective Default. *SSRN Electronic Journal* . [[Crossref](#)]
1269. Abdul Abiad, Margarita Debuque-Gonzales, Andrea Loren Sy. 2017. The Role and Impact of Infrastructure in Middle-Income Countries: Anything Special?. *SSRN Electronic Journal* . [[Crossref](#)]
1270. Barry Eichengreen, Donghyun Park, Kwanho Shin. 2017. The Landscape of Economic Growth: Do Middle-Income Countries Differ?. *SSRN Electronic Journal* . [[Crossref](#)]
1271. Gemma Bolotaulo Estrada, Xuehui Han, Donghyun Park, Shu Tian. 2017. Asia's Middle-Income Challenge: An Overview. *SSRN Electronic Journal* . [[Crossref](#)]
1272. Jin-Young Moon, Minsoo Han, Jihei Song, Eunmi Kim. 2017. ##### ## ##### ##### ## ## ## (Global Application and Economic Analysis of Carbon Pricing for Emissions Reduction). *SSRN Electronic Journal* . [[Crossref](#)]
1273. Valerie Cerra, Martha Tesfaye Woldemichael. 2017. Launching Export Accelerations in Latin America and the World. *IMF Working Papers* 17:43, 1. [[Crossref](#)]
1274. Gustavo Adler, Romain Duval, Davide Furceri, Sinem Kiliç Çelik, Ksenia Koloskova, Marcos Poplawski-Ribeiro. 2017. Gone with the Headwinds: Global Productivity. *Staff Discussion Notes* 17:04, 1. [[Crossref](#)]
1275. Reda Cherif, Fuad Hasanov, Aditya Pande. 2017. Riding the Energy Transition: Oil Beyond 2040. *IMF Working Papers* 17:120, 1. [[Crossref](#)]
1276. International Monetary Fund. 2017. Eastern Caribbean Currency Union: Selected Issues. *IMF Staff Country Reports* 17:151, 1. [[Crossref](#)]
1277. Sakai Ando, Koffie Ben Nassar. 2017. Indexing Structural Distortion: Sectoral Productivity, Structural Change and Growth. *IMF Working Papers* 17:205, 1. [[Crossref](#)]
1278. Sergi Lanau, Jorge Roldos, Jose Daniel Rodríguez-Delgado. 2017. Potential Growth in Colombia. *IMF Working Papers* 17:238, 1. [[Crossref](#)]
1279. International Monetary Fund.. 2017. Dominica: Selected Issues. *IMF Staff Country Reports* 17:392, 1. [[Crossref](#)]
1280. Jonathan Adams, Philip Barrett. 2017. Why are Countries' Asset Portfolios Exposed to Nominal Exchange Rates?. *IMF Working Papers* 17:291, 1. [[Crossref](#)]
1281. Matthew Fuhrmann. 2017. When Do Leaders Free-Ride? Business Experience and Contributions to Collective Defense. *SSRN Electronic Journal* . [[Crossref](#)]
1282. Éric Heyer, Xavier Timbeau. 2017. Chômage, déficit, dette publique. *Revue de l'OFCE* 151:2, 135. [[Crossref](#)]
1283. Djavad Salehi-Isfahani. 2017. Poverty and Income Inequality in the Islamic Republic of Iran. *Revue internationale des études du développement* N° 229:1, 113. [[Crossref](#)]
1284. Gregory Casey, Oded Galor. 2017. Is faster economic growth compatible with reductions in carbon emissions? The role of diminished population growth. *Environmental Research Letters* 12:1, 014003. [[Crossref](#)]

1285. Esin Kılıç, Erol Kutlu. Trade Openness and Unemployment in Transition Economies 371-387. [\[Crossref\]](#)
1286. Praopan Pratoomchat. Tourism-Led Growth Hypothesis and Foreign Direct Investment in ASEAN 224-249. [\[Crossref\]](#)
1287. Nobuhiro Mizuno, Katsuyuki Naito, Ryosuke Okazawa. 2017. Inequality, extractive institutions, and growth in nondemocratic regimes. *Public Choice* **170**:1-2, 115-142. [\[Crossref\]](#)
1288. Dario Debowicz, Alejandro Saporiti, Yizhi Wang. 2017. A Study on Altruistic and Electoral Income Redistribution: Theory and Data. *SSRN Electronic Journal* . [\[Crossref\]](#)
1289. Damir Stijepic. 2017. A Cross-Country Study of Workers' Skills and Unemployment Flows. *SSRN Electronic Journal* . [\[Crossref\]](#)
1290. Katja Frieler, Stefan Lange, Franziska Piontek, Christopher P. O. Reyer, Jacob Schewe, Lila Warszawski, Fang Zhao, Louise Chini, Sebastien Denvil, Kerry Emanuel, Tobias Geiger, Kate Halladay, George Hurtt, Matthias Mengel, Daisuke Murakami, Sebastian Ostberg, Alexander Popp, Riccardo Riva, Miodrag Stevanovic, Tatsuo Suzuki, Jan Volkholz, Eleanor Burke, Philippe Ciais, Kristie Ebi, Tyler D. Eddy, Joshua Elliott, Eric Galbraith, Simon N. Gosling, Fred Hattermann, Thomas Hickler, Jochen Hinkel, Christian Hof, Veronika Huber, Jonas Jägermeyr, Valentina Krysanova, Rafael Marcé, Hannes Müller Schmied, Ioanna Mouratiadou, Don Pierson, Derek P. Tittensor, Robert Vautard, Michelle van Vliet, Matthias F. Biber, Richard A. Betts, Benjamin Leon Bodirsky, Delphine Deryng, Steve Frolking, Chris D. Jones, Heike K. Lotze, Hermann Lotze-Campen, Ritvik Sahajpal, Kirsten Thonicke, Hanqin Tian, Yoshiki Yamagata. 2017. Assessing the impacts of 1.5 °C global warming – simulation protocol of the Inter-Sectoral Impact Model Intercomparison Project (ISIMIP2b). *Geoscientific Model Development* **10**:12, 4321-4345. [\[Crossref\]](#)
1291. Leran Wang. 2017. Notional Defined Contribution Pension, Fertility, and Efficiency Wages in an Overlapping Generations Economy. *SSRN Electronic Journal* . [\[Crossref\]](#)
1292. Jamie Bologna Pavlik, Andrew T. Young. 2017. The Legacy of Representation in Medieval Europe for Incomes and Institutions Today. *SSRN Electronic Journal* . [\[Crossref\]](#)
1293. Chander Kant. 2017. Catch-Up Index, Relative and Absolute Convergence, South Asia and Sub-Saharan Africa. *SSRN Electronic Journal* **125** . [\[Crossref\]](#)
1294. Francisco N. Alvarez, Abdulrahman M. El-Sayed. 2016. National income inequality and ineffective health insurance in 35 low- and middle-income countries. *Health Policy and Planning* **113**, czw156. [\[Crossref\]](#)
1295. Martin Gassebner, Jerg Gutmann, Stefan Voigt. 2016. When to expect a coup d'état? An extreme bounds analysis of coup determinants. *Public Choice* **169**:3-4, 293-313. [\[Crossref\]](#)
1296. Jing-Li Fan, Yun-Bing Hou, Qian Wang, Ce Wang, Yi-Ming Wei. 2016. Exploring the characteristics of production-based and consumption-based carbon emissions of major economies: A multiple-dimension comparison. *Applied Energy* **184**, 790-799. [\[Crossref\]](#)
1297. Zheng Fang. 2016. Data on examining the role of human capital in the energy-growth nexus across countries. *Data in Brief* **9**, 540-542. [\[Crossref\]](#)
1298. Gazi A. Uddin, Khorshed Alam, Jeff Gow. 2016. Population age structure and savings rate impacts on economic growth: Evidence from Australia. *Economic Analysis and Policy* **52**, 23-33. [\[Crossref\]](#)
1299. Klaus Gründler, Tommy Krieger. 2016. Democracy and growth: Evidence from a machine learning indicator. *European Journal of Political Economy* **45**, 85-107. [\[Crossref\]](#)
1300. Tim Krieger, Daniel Meierrieks. 2016. Political capitalism: The interaction between income inequality, economic freedom and democracy. *European Journal of Political Economy* **45**, 115-132. [\[Crossref\]](#)

1301. Joonkyung Ha, Sang-Hyop Lee. 2016. Demographic dividend and Asia's economic convergence towards the US. *The Journal of the Economics of Ageing* **8**, 28-41. [[Crossref](#)]
1302. Sebastian Hess, Carl Johan Lagerkvist, William Redekop, Ashkan Pakseresht. 2016. Consumers' evaluation of biotechnologically modified food products: new evidence from a meta-survey. *European Review of Agricultural Economics* **43**:5, 703-736. [[Crossref](#)]
1303. Timothy M Tan, Paul Spiegel, Christopher Haskew, P Gregg Greenough. 2016. Does spending on refugees make a difference? A cross-sectional study of the association between refugee program spending and health outcomes in 70 sites in 17 countries. *Conflict and Health* **10**:1. . [[Crossref](#)]
1304. Adelaide Duarte,, Marta Simões,, João Sousa Andrade. 2016. The Welfare State and Economic Performance: Quantiles and Nonlinearities. *Applied Economics Quarterly* **62**:4, 269-296. [[Crossref](#)]
1305. , . Introduction 1-74. [[Crossref](#)]
1306. Susanne Becken, Fabrizio Carmignani. 2016. Does tourism lead to peace?. *Annals of Tourism Research* **61**, 63-79. [[Crossref](#)]
1307. Yogi Sugiawan, Shunsuke Managi. 2016. The environmental Kuznets curve in Indonesia: Exploring the potential of renewable energy. *Energy Policy* **98**, 187-198. [[Crossref](#)]
1308. Jesper Rangvid, Pedro Santa-Clara, Maik Schmeling. 2016. Capital market integration and consumption risk sharing over the long run. *Journal of International Economics* **103**, 27-43. [[Crossref](#)]
1309. Miriam Breckner, Florian Englmaier, Till Stowasser, Uwe Sunde. 2016. Resilience to natural disasters — Insurance penetration, institutions, and disaster types. *Economics Letters* **148**, 106-110. [[Crossref](#)]
1310. William A. Masters, Anaya Hall, Elena M. Martinez, Peilin Shi, Gitanjali Singh, Patrick Webb, Dariush Mozaffarian. 2016. The nutrition transition and agricultural transformation: a Preston curve approach. *Agricultural Economics* **47**:S1, 97-114. [[Crossref](#)]
1311. Benedikt Herz, Malwina Mejer. 2016. On the fee elasticity of the demand for trademarks in Europe. *Oxford Economic Papers* **68**:4, 1039-1061. [[Crossref](#)]
1312. Hubert Escaith. 2016. Aggregate Demand, Vertical Specialization and Growth Accounting. *Journal of International Commerce, Economics and Policy* **07**:03, 1650016. [[Crossref](#)]
1313. ERIC GHYSELS, ALBERTO PLAZZI, ROSSEN VALKANOV. 2016. Why Invest in Emerging Markets? The Role of Conditional Return Asymmetry. *The Journal of Finance* **71**:5, 2145-2192. [[Crossref](#)]
1314. A. Zaytsev. 2016. International differences in labor productivity: Role of capital, technological level and resource rent. *Voprosy Ekonomiki* :9, 67-93. [[Crossref](#)]
1315. Amna Niazi, Hamid Hassan. 2016. Trust and economic performance. *Review of International Business and Strategy* **26**:3, 371-391. [[Crossref](#)]
1316. Charles I. Jones, Peter J. Klenow. 2016. Beyond GDP? Welfare across Countries and Time. *American Economic Review* **106**:9, 2426-2457. [[Abstract](#)] [[View PDF article](#)] [[PDF with links](#)]
1317. Paul J. Burke, Hewen Yang. 2016. The price and income elasticities of natural gas demand: International evidence. *Energy Economics* **59**, 466-474. [[Crossref](#)]
1318. Fadi Hassan. 2016. The price of development: The Penn–Balassa–Samuelson effect revisited. *Journal of International Economics* **102**, 291-309. [[Crossref](#)]
1319. Keisuke Otsu, Katsuyuki Shibayama. 2016. Population Aging and Potential Growth in Asia. *Asian Development Review* **33**:2, 56-73. [[Crossref](#)]
1320. Neil Foster--McGregor, Bart Verspagen. 2016. The Role of Structural Change in the Economic Development of Asian Economies. *Asian Development Review* **33**:2, 74-93. [[Crossref](#)]
1321. Jong-Wha Lee. 2016. Korea's Economic Growth and Catch-up: Implications for China. *China & World Economy* **24**:5, 71-97. [[Crossref](#)]

1322. Justin Yifu Lin, Guanghua Wan, Peter J. Morgan. 2016. Factors Affecting the Outlook for Medium-term to Long-term Growth in China. *China & World Economy* 24:5, 20-41. [[Crossref](#)]
1323. Jens J. Krüger. 2016. Radar scanning the world production frontier. *Journal of Productivity Analysis* 46:1, 1-13. [[Crossref](#)]
1324. Sushanta Mallick, Roman Matousek, Nickolaos G. Tzeremes. 2016. Financial development and productive inefficiency: A robust conditional directional distance function approach. *Economics Letters* 145, 196-201. [[Crossref](#)]
1325. Jenifer Whitten-Woodring. 2016. News about her: The effects of media freedom and internet access on women's rights. *Journal of Human Rights* 15:3, 383-407. [[Crossref](#)]
1326. Andrew T. Young, Hernando Zuleta. 2016. Golden Rules of Wages. *Southern Economic Journal* 83:1, 253-270. [[Crossref](#)]
1327. Andrew M Ryan, Sam Krinsky, Evangelos Kontopantelis, Tim Doran. 2016. Long-term evidence for the effect of pay-for-performance in primary care on mortality in the UK: a population study. *The Lancet* 388:10041, 268-274. [[Crossref](#)]
1328. Masahiko Shibamoto, Yoshiro Tsutsui, Chisako Yamane. 2016. Understanding regional growth dynamics in Japan: Panel co-integration approach utilizing the PANIC method. *Journal of the Japanese and International Economies* 40, 17-30. [[Crossref](#)]
1329. Vincenzo Cuciniello, Luisa Lambertini. 2016. Optimal exchange rate flexibility with large labor unions. *Journal of International Money and Finance* 63, 112-136. [[Crossref](#)]
1330. Yiannis Kountouris, Kyriaki Remoundou. 2016. Cultural Influence on Preferences and Attitudes for Environmental Quality. *Kyklos* 69:2, 369-397. [[Crossref](#)]
1331. Brandon J Kinne. 2016. Agreeing to arm. *Journal of Peace Research* 53:3, 359-377. [[Crossref](#)]
1332. Jan Hájek, Roman Horváth. 2016. The Spillover Effect of Euro Area on Central and Southeastern European Economies: A Global VAR Approach. *Open Economies Review* 27:2, 359-385. [[Crossref](#)]
1333. Robert Inklaar, W. Erwin Diewert. 2016. Measuring industry productivity and cross-country convergence. *Journal of Econometrics* 191:2, 426-433. [[Crossref](#)]
1334. Kathleen Beegle, Luc Christiaensen, Andrew Dabalen, Isis Gaddis. The State of Data for Measuring Poverty 25-56. [[Crossref](#)]
1335. R.W. Hafer. 2016. Cross-country evidence on the link between IQ and financial development. *Intelligence* 55, 7-13. [[Crossref](#)]
1336. Douglas L. Campbell. 2016. Measurement matters: Productivity-adjusted weighted average relative price indices. *Journal of International Money and Finance* 61, 45-81. [[Crossref](#)]
1337. David Gomtsyan. 2016. Economic Development and the Direction of FDI Flows. *Global Economy Journal* 16:1, 91-112. [[Crossref](#)]
1338. Santiago Capraro Rodríguez. 2016. CRÍTICA DE LIBROS. *Investigación Económica* 75:295, 239-252. [[Crossref](#)]
1339. Matteo Grazzi, Carlo Pietrobelli, Adam Szirmai. Determinants of Enterprise Performance in Latin America and the Caribbean: What Does the Micro-Evidence Tell Us? 1-36. [[Crossref](#)]
1340. Chienwu (Alex) Hsueh. 2016. Taiwan's Perspective on China's "One Belt, One Road" Strategy. *Journal of Contemporary East Asia Studies* 5:2, 37-60. [[Crossref](#)]
1341. Jerg Gutmann. 2016. Pulling Leviathan's Teeth The Political Economy of Death Penalty Abolition. *SSRN Electronic Journal* . [[Crossref](#)]
1342. Holger Strulik. 2016. Desire and Development. *SSRN Electronic Journal* . [[Crossref](#)]
1343. Jo Reynaerts, Jakob Vanschoonbeek. 2016. The Economics of State Fragmentation: Assessing the Economic Impact of Secession. *SSRN Electronic Journal* . [[Crossref](#)]

1344. Ingvild Almms, Anders Kjelsrud. 2016. Pro-Poor Price Trends and Inequality -- The Case of India. *SSRN Electronic Journal* . [[Crossref](#)]
1345. David I. Stern, Jeremy <!--van Dijk. 2016. Economic Growth and Global Particulate Pollution Concentrations. *SSRN Electronic Journal* . [[Crossref](#)]
1346. Jong-Wha Lee. 2016. The Republic of Korea's Economic Growth and Catch-Up: Implications for the People's Republic of China. *SSRN Electronic Journal* . [[Crossref](#)]
1347. Chander Kant. 2016. State of the Developing World: PPP Income, Catching-Up/Falling Behind, and No Growth. *SSRN Electronic Journal* . [[Crossref](#)]
1348. Dan Su, Yang Yao. 2016. Manufacturing as the Key Engine of Economic Growth for Middle-Income Economies. *SSRN Electronic Journal* . [[Crossref](#)]
1349. Jong-Wha Lee. 2016. China's Economic Growth and Convergence. *SSRN Electronic Journal* . [[Crossref](#)]
1350. Nicholas Bloom, John Van Reenen. 2016. Management as a Technology?. *SSRN Electronic Journal* . [[Crossref](#)]
1351. Kan Chen, Mario J. Crucini. 2016. Trends and Cycles in Small Open Economies: Making the Case for a General Equilibrium Approach. *SSRN Electronic Journal* . [[Crossref](#)]
1352. Theodore R. Breton, Gustavo J. Canavire Bacarreza. 2016. Low Test Scores in Latin America: Poor Schools, Poor Families, or Something Else?. *SSRN Electronic Journal* . [[Crossref](#)]
1353. Colin O'Reilly, Ryan H Murphy. 2016. Exogenous Resource Shocks and Economic Freedom. *SSRN Electronic Journal* . [[Crossref](#)]
1354. Istvvv Deddk, kos Dombi. 2016. The Burden of Public Debt in Neoclassical Growth Models: Do We Have to Worry About it?. *SSRN Electronic Journal* . [[Crossref](#)]
1355. Evan W. Anderson, William A. Brock, Alan Sanstad. 2016. Robust Consumption and Energy Decisions. *SSRN Electronic Journal* . [[Crossref](#)]
1356. Paul J. Burke, Hewen Yang. 2016. The Price and Income Elasticities of Natural Gas Demand: International Evidence. *SSRN Electronic Journal* . [[Crossref](#)]
1357. Elias Braunfels. 2016. Further Unbundling Institutions. *SSRN Electronic Journal* . [[Crossref](#)]
1358. Tino Berger, Lorenzo Pozzi. 2016. Is There Really a Global Business Cycle? A Dynamic Factor Model with Stochastic Factor Selection. *SSRN Electronic Journal* . [[Crossref](#)]
1359. Sutirtha Roy, Martin Kessler. 2016. Glimpsing the End of Economic History? Unconditional Convergence and the Missing Middle Income Trap. *SSRN Electronic Journal* . [[Crossref](#)]
1360. Rik W. Hafer. 2016. New Estimates on the Relationship between IQ, Economic Growth and Welfare. *SSRN Electronic Journal* . [[Crossref](#)]
1361. Inna Grinis. 2016. Trend Growth Durations & Shifts. *SSRN Electronic Journal* . [[Crossref](#)]
1362. Jong-Wha Lee, Ju Hyun Pyun. 2016. North Korea's Economic Integration and Growth Potential. *SSRN Electronic Journal* . [[Crossref](#)]
1363. Tamon Asonuma, Marcos Chamon, Akira Sasahara. 2016. Trade Costs of Sovereign Debt Restructurings: Does a Market-Friendly Approach Improve the Outcome?. *SSRN Electronic Journal* . [[Crossref](#)]
1364. Matteo Fiorini, Bernard Hoekman, Cllment Malgouyres. 2016. Services Policy Reform and Manufacturing Employment: Evidence from Transition Economies. *SSRN Electronic Journal* . [[Crossref](#)]
1365. Alexander Bick, Bettina Bruggemann, Nicola Fuchs-Schundeln. 2016. Hours Worked in Europe and the US: New Data, New Answers. *SSRN Electronic Journal* . [[Crossref](#)]
1366. Marc Hofstetter. 2016. Paz Y Pib (Peace and GDP). *SSRN Electronic Journal* . [[Crossref](#)]



1367. Hernando Zuleta, Laura Beatriz Gomez. 2016. Conflict, Sectors, Regions Y Crecimiento (Conflict, Sectors, Regions and Growth). *SSRN Electronic Journal* . [[Crossref](#)]
1368. RRRhan Kamil Altun. 2016. The Effect of Political Stability and Governance on Economic Development. *SSRN Electronic Journal* . [[Crossref](#)]
1369. Kuawo-Assan Johnson. 2016. Do Internet and Human Capital Matter for Economic Growth in Developing Countries? Empirical Evidence from WAEMU Countries. *Modern Economy* **07**:11, 1186-1197. [[Crossref](#)]
1370. Szilard Benk, Tamas Csabafi, Jing Dang, Max Gillman, Michal Kejak. 2016. Tuning in RBC Growth Spectra. *IMF Working Papers* **16**:215, 1. [[Crossref](#)]
1371. Tamon Asonuma, Marcos Chamon, Akira Sasahara. 2016. Trade Costs of Sovereign Debt Restructurings: Does a Market-Friendly Approach Improve the Outcome?. *IMF Working Papers* **16**:222, 1. [[Crossref](#)]
1372. Vitor Gaspar, Laura Jaramillo, Philippe Wingender. 2016. Tax Capacity and Growth: Is there a Tipping Point?. *IMF Working Papers* **16**:234, 1. [[Crossref](#)]
1373. International Monetary Fund. 2016. Albania: Selected Issues. *IMF Staff Country Reports* **16**:143, 1. [[Crossref](#)]
1374. Sonali Jain-Chandra, Tidiane Kinda, Kalpana Kochhar, Shi Piao, Johanna Schauer. 2016. Sharing the Growth Dividend: Analysis of Inequality in Asia. *IMF Working Papers* **16**:48, 1. [[Crossref](#)]
1375. Chander Kant. 2016. State of the Developing World: PPP Income, Catching-Up/Falling Behind, and No Growth. *SSRN Electronic Journal* **91**. . [[Crossref](#)]
1376. C.I. Jones. The Facts of Economic Growth 3-69. [[Crossref](#)]
1377. G.D. Hansen, L.E. Ohanian. Neoclassical Models in Macroeconomics 2043-2130. [[Crossref](#)]
1378. Hideki Toya, Mark Skidmore. 2015. Information/communication technology and natural disaster vulnerability. *Economics Letters* **137**, 143-145. [[Crossref](#)]
1379. Sebastian Böhm, Volker Grossmann, Thomas M. Steger. 2015. Does expansion of higher education lead to trickle-down growth?. *Journal of Public Economics* **132**, 79-94. [[Crossref](#)]
1380. Kevin S. Nell. 2015. The Complementary Nature Between Technological Progress and Capital Accumulation in India's Long-Run Growth Transitions. *Metroeconomica* **66**:4, 565-605. [[Crossref](#)]
1381. Dale W. Jorgenson, Khuong M. Vu. 2015. Australia and the growth of the world economy: 24th Colin Clark Memorial Lecture. *Economic Analysis and Policy* **47**, 90-100. [[Crossref](#)]
1382. Victor Gay, Daniel L. Hicks, Estefania Santacreu-Vasut, Amir Shoham. 2015. Language and Female Economic Participation. *SSRN Electronic Journal* . [[Crossref](#)]
1383. Munseob Lee. 2015. Allocation of Female Talent and Cross-Country Productivity Differences. *SSRN Electronic Journal* . [[Crossref](#)]
1384. Jingjing Huo. 2015. Social Democracy and the Labor Share of National Income in Affluent Capitalist Democracies. *SSRN Electronic Journal* . [[Crossref](#)]
1385. Alicia GGmez-Tello. 2015. Land Specialization in Spain: The Effects of the Common Agricultural Policy. *SSRN Electronic Journal* . [[Crossref](#)]
1386. Alicia GGmezzTello. 2015. Foreign Direct Investment and Immigration Inflows in Spain. *SSRN Electronic Journal* . [[Crossref](#)]
1387. David I. Stern. 2015. The Environmental Kuznets Curve after 25 Years. *SSRN Electronic Journal* . [[Crossref](#)]
1388. Viktoria C. E. Langer, Wolfgang Maennig, Felix Richter. 2015. News Shocks in the Data: Olympic Games and Their Macroeconomic Effects - Reply. *SSRN Electronic Journal* . [[Crossref](#)]

1389. Damir Stijepic. 2015. Workplace Heterogeneity and the Returns to Versatility. *SSRN Electronic Journal* . [[Crossref](#)]
1390. David Le Bris. 2014. Family Characteristics and Economic Development. *SSRN Electronic Journal* . [[Crossref](#)]
1391. Susan Perkins, Jaee Cho, Katherine Phillips, Negin Toosi. 2014. Can Female Leaders Mitigate the Negative Effects of Racial Diversity? National Leaders and Structural Shifts. *SSRN Electronic Journal* . [[Crossref](#)]
- 1392.. Main Properties of MSP-ECAS-Model 31-72. [[Crossref](#)]