



Economic growth, innovation, institutions, and the Great Enrichment

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Abstract

A number of factors are held up as causes of the economic takeoff of the early 1800s in northwest Europe and North America and later Asia, though certain popularly believed factors such as geography and capital accumulation do not have much empirical support. Nor do other commonly held factors such as trade, plunder, and colonization. It is better understood today that productivity enhancing innovation, new venture and new market creation enabling consumption by a wider range of consumers yield firm and economic growth, as well as improved standards of living. In this overview, these literatures are summarized and examined. In addition the evidence regarding the effect of institutions on economic growth is discussed as well as the role of international business in the transfer of positive institutions and organizational routines.

Keywords Economic history · Economic growth · Institutional theory · International business · Great Enrichment · Trade · Innovation

Two centuries ago, the average per capita income in the world was less than that of the West African country of Gambia today. At that time, in the early 1800s, the average human consumed less than \$3 a day (in current US dollars) and could expect future generations to go on consuming that same amount as their ancestors long had. Likewise, the average adult in future industrial powerhouses Japan and Sweden had less hope than a very poor person in Cambodia today of seeing the end of his or her country's poverty. But change was in the air. Starting in the 1700s, The Netherlands,

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and shortly thereafter, the United Kingdom (UK), northwestern Europe and the United States (US) started experiencing increased economic growth that would soon give their populations new expectations about their lives and the future. Spurred by inventions and productivity improvements, new firms and industries would change the economic landscape, especially for the poor (Mokyr, 1992).

Economies did not grow very much from ancient times to the Industrial Revolution of the 1700s, rather some experienced a sharp uptick in growth in the 19th and 20th centuries after a millennium of very slow growth (Maddison, 2007).¹ A typical person in Japan or Sweden that earned two to three dollars per day in 1800, now can earn and spend about \$100 a day. Only the wealthiest nobles had that much to spend in 1800, whereas today an average person in a developed economy has that much. Even countries that rejected the industrial and institutional reforms transforming economies in the 19th and 20th centuries (and are only now starting to accept them) are experiencing growth takeoffs (McCloskey, 2010, 2016). Moreover if improvements in the efficiency and output of products (such as the vast reductions in the cost of lighting, for example) are included in this calculation, the real daily earnings figure goes up to as much as \$200 to \$300 per day (Nordhaus, 1997) representing a 100 fold improvement from 1800. This improvement in economic development has added greatly to public health, life expectancy and standards of living in much of the world (McCloskey, 2006; Rosling, Rönnlund, & Rosling, 2018).

Research in economic history and management (Christensen & Raynor, 2013; Maddison, 2013; McCloskey, 2006; Mokyr, 2016) has strongly contributed to the understanding of the rapid growth in incomes (and purchasing power) over the past two hundred years, in what has come to be called the Great Enrichment (McCloskey, 2016). There is much agreement about the starting dates for the Great Enrichment, and how many growth spurts appeared in centuries past in Ancient Greece, Rome, and Song China, and there is little disagreement about its startling magnitude (Bresson, 2015; Goldstone, 2002; McCloskey, 2010, 2016, 2017; Scheidel, Morris, & Saller, 2008). Yet there are some debates about the factors that led to and have sustained the economic and firm growth of the past two centuries. This paper provides an overview of these and examines and summarizes the evidence on the factors that are commonly held to explain the economic takeoff of the 1800s (McCloskey, 2010, 2016; Mokyr, 1992, 2016). In doing so, the paper seeks to clarify the evidence on popularly held though largely specious explanations for growth such as geography, capital accumulation, and trade.

To address the several factors that are thought to be related to economic growth, (including the weaker factors), three main streams of research are initially examined. First, there is a long and well known line of theorizing that assigns a primary role to geography, such as the work of Diamond (1997) and Sachs (2003). Recent research related to geography in international business has focused more on regional advantages conferred by regions and the clusters (Porter, 1990; Saxenian, 1996). Generally, however, geography

¹ There were temporary economic efflorescences, as Goldstone (2002) has called them, such as in Greece and Rome under certain leaders (e.g. Bresson, 2015) or the boom of Song China. These led to a temporary doubling or tripling of income over a century or more. Yet these were temporary and income usually leveled off or even drifted back toward earlier levels.

fails to explain growth, income and firm competitiveness (Davies & Ellis, 2000; Easterly & Levine, 2003) as the supposed geographic advantages were long present before economic growth started and they fail to explain major growth and development differences within the same geographic region (Rodrik, Subramanian, & Trebbi, 2004).

A second view of economic growth focuses on capital accumulation of various types. This includes a wide range of literature in economics including capital accumulation in terms of savings and increased thrift (Lucas, 2002; Piketty, 2014; Weber, 1930), colonialism and plunder (Findlay & O'Rourke, 2009). Yet recent work in economic history has shown that in Britain, an early exemplar of economic growth, investment in physical capital as a share of national income was actually below European norms of the nineteenth century and earlier (McCloskey, 2010, 2017). Nor were colonies particularly productive. Countries such as Britain, France, and Spain experienced faster economic growth after divesting colonies (McCloskey, 2010; Mokyr, 2010). And several countries with no colonies grew at similar rates (McCloskey, 2010, 2017).

A third view emphasizes the role of international trade as a driver of productivity and income growth. This is called the integration view because it examines participation in the larger global economy, including trade, but also the transfer of technology, knowledge, human capital, and institutions, a key role in fostering economic growth. The transportation arguments fall into this group of work as well. It turns out that international trade by itself is a minor factor compared with domestic trade as its efficiencies are minor (McCloskey, 2010, 2017). Though it is true that trade and foreign direct investment (FDI) do bring other institutional change and improved management techniques that are helpful to economic growth (Bender, Bloom, Card, Van Reenen, & Wolter, 2018; Bloom et al., 2018).²

To explain growth in economies, newer lines of research are showing the importance of innovation and new venture and market creation and how this is encouraged (Ahlstrom, 2010; Christensen, Ojomo, & Dillon, 2019; McCloskey, 2010, 2017; Romer, 1990). Innovation in new (and improved) goods and services, especially those that enhance productivity and standards of living, are proving to be the fount of growth in economies (Christensen et al., 2019; Crafts, 2004{2005}; McCloskey, 2010, 2016). Other research in the areas of positive, inclusive institutions (Acemoglu & Robinson, 2012; Baumol, 2002) and accompanying informal institutions is also helpful in explaining how innovation and new ventures are spurred and also protected from those who would stop them (Christensen et al., 2019; McCloskey, 2017; Mokyr, 2002, 2016; Ogilvie, 2019). In addition, research on how helpful institutions are carried across borders or otherwise encouraged by international business is also examined. Thus, this paper provides an overview of the factors that are commonly held as causing economic growth and further examines the role of property rights, good governance and other management techniques, as well as positive, less formal institutional change (Bruton & Ahlstrom, 2003; McCloskey, 2017; Scott, 2013; Young, Peng, Ahlstrom, Bruton, & Jiang, 2008). This paper thus contributes by summarizing the various factors linked to a country's economic growth and clarifying their relative importance. In

² There are other, less accepted arguments such as rainfall and coal deposits that roughly fit into the geographic view. These views are reviewed in some detail in McCloskey (2010).

doing so, it highlights the contribution of innovation, new ventures, and the role played by institutions and international business with respect to economic growth.

Overview of literature

Slow (then fast) economic growth

In recent years, incomes have reached historically high levels in many countries of the world. Though some have argued that economic growth has slowed down recently (Gordon, 2016), this is only correct if China and India are excluded, which they should not be, as these two countries represent about 40% of the world's population. Indeed if China and India are included, world economic growth has in recent decades been running at 4.8% annually, which is actually faster than the previous fast growth rates of the late 1800s and the postwar period (McCloskey, 2017).

How did the world get to historically high incomes? As noted earlier, economic growth has not followed a slow, steady increase from the bronze age (Maddison, 2001; McCloskey, 2010). Rather, growth in terms of per capita income (or its rough equivalent in consumption) was mostly flat for many centuries only to see a sharp increase in the Netherlands, UK and US, followed by other (mostly) European countries around 1800.³ This sharp upturn in economic growth helped to create, in the words of economic historian Christopher Crafts, a “society that was capable of sustained technological progress and faster total factor productivity growth” (Crafts, 2004{2005}: 10). He might have added that it also helped to create societies, first in Europe and the Americas, and later in Asia and now Africa that are much healthier, more resilient, and have increased free time to pursue leisure, entrepreneurial, and techno-scientific activities (Mokyr, 1992; Schell, Reilly, Rosling, Peterson, & Ekström, 2007). This increase in average incomes by 1000% or more over the past two centuries and a doubling and sometimes tripling of lifespans over the same time has led researchers to call the past two centuries the Great Enrichment (McCloskey, 2016; Mokyr, 2016).

This somewhat surprising growth pattern is by no means inevitable or commonplace (Maddison, 2006). For example, during the first millennium CE (year 0 to 1000), there was very little advance in people's income, apart from temporary efflorescences of economic growth in Rome or Song China (Goldstone, 2002). The annual income of the average person remained at about \$400 (in 1990 dollars) throughout much of that time (Maddison, 2006). From the years 1000 to 1820, average annual per capita income rose very slowly to \$667, or a little higher in some places such as China (Maddison, 2006, p. 30). Yet starting in 1820, income started to take off in the UK and some other countries. Having risen just 50% in total over the previous eight centuries, per capita income worldwide rose an unprecedented nine times between 1820 and the end of the twentieth century, and much higher in some parts of the world (Maddison, 2001) (see Fig. 1).

³ The time of the economic take-off depends on the country in question. The United Kingdom (UK) and United States (US) had an economic take-off in the early 1800s, with the Netherlands perhaps a bit earlier in the 1700s, Sweden's takeoff occurred in the late nineteenth century, and Spain, China and India experienced economic takeoffs much later in the twentieth century Maddison, 2006; McCloskey, 2010).

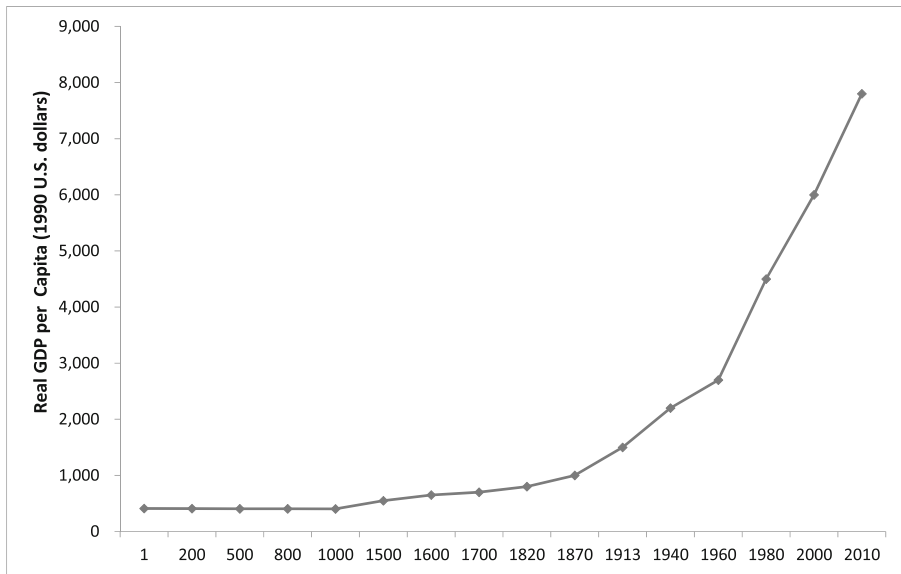


Fig. 1 Average World GDP per Capita 1–2010. Source: Angus Maddison (2013); Tytell, Emsbo-Mattingly, and Hofschire (2016)

More recently, the rising slope of economic of growth has also reached China and India. Thus, the share of world population living on less than \$1.25 a day in constant prices fell from 53% to 22% from 1981 to 2008 (Ahlstrom, 2010; Chen, Chang, & Bruton, 2017). From 1800 to the present, the average person in the world has been enriched in real terms by a factor of 10, or some 900% (Maddison, 2013), and closer to a factor of 30 or higher in the more developed economies (McCloskey, 2016). Previous temporary economic efflorescences (Goldstone, 2002), such as the Greece and Rome under certain leaders or the boom of Song China, and indeed the mini Industrial Revolution of the Middle Ages, resulted in a doubling and tripling or more of real income per person during those limited growth eras. Bresson (2015) for example, places the Greek factor of increase in the 400 years from 750 BCE up to 350 BCE at about 500%. This enabled the emergence of Greek philosophy, political sciences and medicine, but the increase was not sustained after Alexander's conquests.⁴

Nonetheless, the ancient Greek efflorescence of 500% growth in its classical age is much less than the 1000% to 3000% over past two centuries. And since 1800, the increase in the average person's buying power is much higher, perhaps closer to 100 fold or about 10,000% in developed economies, if the better quality of lighting, medicine, housing, communications and numerous other everyday goods and services are taken into account (Nordhaus, 1997). For example, today, eyeglasses cost in real terms about as much as they did 30 years ago. But they are much more durable and do not break when dropped, and thus last years longer – essentially adding to the

⁴ Paradoxically, Greece slipped back into no (or slow) growth stagnation for centuries, and lost its independence until the nineteenth century (Bresson, 2015).

consumer's standard of living. Thus what need to be examined is the factors that did (and likely did not) lead to the sustained economic (and firm) growth of the past two centuries.

Some common explanations for the growth of economies

Geography

There is a long and well known line of research that assigns a preeminent role to geography in explaining economic growth (e.g. Diamond, 1997; Sachs, 2003). Geography certainly is the key determinant of climate and of natural resource endowments, and it can also play an important role in disease, transport costs, trade, and the diffusion of technology. It certainly exerts influence on agricultural productivity and the ability to build up and store surplus production, so societies do not have devote all of their time to their crops, livestock, shelter and safety (Harris, 1979). Geography can affect income to a limited extent by determining, say, agricultural productivity and perhaps impacting what institutions are introduced in a country (Easterly & Levine, 2003). As such, geography influences which societies could develop early technological advances such as the wheel and seagoing transportation, build resistance to disease, and store surpluses beyond subsistence (Diamond, 1997; Harris, 1979; Sowell, 1999).

Diamond (1997) is a key proponent of geography's impact on economic development and divergence. He provides evidence of why early advanced societies in the Middle Ages historically tended to be Eurasian, from Europe to China, and thus why their conquests may have slowed development in other regions such as the Americas or southeast Asia, particularly due to the introduction of disease vectors which killed or hobbled the populations in those more isolated regions. Indeed, geographic explanations such as those of Diamond (1997), Sowell (1999), and to some extent Landes (1998) all helps explain why China, Asia Minor, and some of East Europe had domesticated chickens, raised grains and grasses. developed the wheel and had more opportunity to develop immunity to disease, while the South Americans or sub-Saharan Africans did not, given their isolation, lack of navigable rivers and ports and inability to trade and exchange ideas and technology.

Yet the geographical justification for economic growth and divergence among economies, shows its limitation in explaining the economic takeoff of the 1800s when the examination is narrowed geographically from the large landmass of Eurasia to the parts of Europe that experienced the vastly different rates of economic growth after 1820. For example, among the many regions Diamond cites as having an advantage, from the Mediterranean and the Fertile Crescent in the Middle East, to China, few countries from those regions actually achieved the faster of the 1800s, though they should have, given their putative "geographical advantages." The geography argument fails to make key distinctions that led nearby economies within the same region such as Germany and Serbia, to achieve much different levels of technological development and income levels. Even Singapore, only 120 miles north of the equator, has a per capita income greater than nearly all states of the world, and by geographic theories' reckoning, possesses no geographical advantage apart from a good port to explain its wealth. Indeed, one can find wealthy regions in nearly all parts of the world and in virtually all climates and geographies. Whatever geographical advantage may be

conferred by being along the temperate Eurasian latitude has not proved to be very differentiating or particularly durable in its effects.

In the study of international business, geographical factors are studied, though generally do not play a direct role in understanding determinants of firm competitiveness and growth potential. There is, however, a long line of related research around firm location including location advantage (Porter, 1990) and regional specialization (e.g. Saxenian, 1996, 2007). This research does suggest that some geographically related advantages such as Germany's weather (requiring firms to have cutting edge environmental innovations on various white goods) or how Japan's limited land resources push innovation on the supply chain (Porter, 1990). Porter's (1990) *Competitive Advantage of Nations* based country competitiveness on success in four corners of a "diamond" originating from "home base" features and competitive factors. Yet in closely examining this work, Rugman (1991) and Davies and Ellis (2000) identified key concerns underlying Porter's (1990) work. In particular, Davies and Ellis (2000) found that this work fails to fully define competitiveness, labelling it sometimes as productivity (rather than advantage in a key area) and at other times as market share. Moreover, national competitiveness was often conflated with market share in a specific set of industries, with a dataset limited to several developed economies (Rugman, 1991; Grant, 1991). Using that approach, it could be said that India has a competitive advantage in outsourced computer advice, given its large market share, but this does not necessarily mean overall competitiveness or economic growth will necessarily follow.

Apart from some theory and definitional problems noted above, what does the empirical evidence say about geography and economic growth? Geography has long been popular a popular factor to explain economic growth. Recent research has shown that controlling for institutional quality, geography has almost *no direct effect* on incomes and economic growth (Easterly & Levine, 2003; Rodrik et al., 2004; Rodrik, 2017). Indeed, the geographic proponents such as Sachs (2003), Diamond (1997) and others often fail to ask the key follow-up question about the additional factors that enabled that part of say, northwest Europe to break out economically, while similar parts, geographically-speaking, of Eurasia (such as China, Eastern Europe, or Ottoman Turkey) failed to have an industrial revolution followed by a growth takeoff (until very recently). Arguments about port access, transportation, and natural harbors continue to be made (Sachs, 2003) but are unconvincing (McCloskey, 2010; Rodrik et al., 2004). In general, geography itself does not provide much explanation of cross-country economic growth patterns, even when geography is defined at subnational levels in terms of firm clusters (McCloskey, 2010; Rodrik et al., 2004). There is research on the related topic of location that has further developed into the integration argument and growth as regions contribute to each other through "brain circulation" as entrepreneurs' tacit knowledge and routines (and sometimes institutional practices of a region) travel to new locations (Ahlstrom & Bruton, 2006; Saxenian, 2007). Yet this line of research is separate from the geography argument, and is briefly examined in the subsequent section on integration and institutions.

Capital accumulation and its variants

While geography remains a popular area of research regarding economic growth and firm advantages, another favored line of research that started with Marx (1867) emphasizes capital accumulation's contribution to economic growth. The accumulation of capital and its

application to efficient production is held as a crucial condition for industrialization and economic growth (Samuelson, 1989; Young, 1995). This line of research on economic growth includes capital accumulation of various types, including conquest, plunder, colonization, or high savings rates and investment (Findlay & O'Rourke, 2009; Lucas, 2002; Piketty, 2014). Though capital accumulation has some research support, much of it a deductive nature (van Zanden, 2009), it has not historically conferred lasting advantages to an economy, its firms and citizens (McCloskey, 2010, 2017). For example, two countries that accumulated some of the biggest stocks of financial capital in the late Middle Ages, Spain and Portugal, failed to parlay that gold, silver, and other assets taken from South and Central America into sustainable productive assets and wealth (McCloskey, 2010). By 1800, the Iberian peninsula was among the poorest regions of Europe. Conquest and plunder, long part of the lamentable history of human society, failed to spur sustained economic growth in the societies best at practicing these such as Mongolia, Rome, and Spain (Goldsworthy, 2016; McCloskey, 2010). Even during temporary doublings and tripling of incomes during certain Roman emperors or Chinese dynasties stocked with tribute and conquest, sustained economic growth and development was relatively short-lived or limited (Goldstone, 2002; Maddison, 2007).

Others have held that aggressive capital accumulation strategies such as colonization, plunder, and conquest are effective in impelling growth (Findlay & O'Rourke, 2009). As noted, the influx of gold and silver via the New World colonies was beneficial to Spain and Portugal though largely only to the King's court and his agents. Plunder did not spur economic growth, which did not come to the Iberian peninsula until well into the twentieth century (Frank, 1998). It has been argued that China lacked easy access to colonizable foreign lands (and thus raw materials like cotton), and this lack of capital accumulation held back China's growth (Pomeranz, 2001). But a lack of cotton was not a problem for China; as late as 1750 China may have had the largest source of cotton in the world and ample potential to develop trade (Pomeranz, 2001). China would have no need to conquer or colonize some or all of the Indian states to the south. Later colonizers had to learn, sometimes the hard way, that colonies would prove to be expensive in blood and treasure and would add little to the general welfare of the economy or to the industrial development of the colonial power. In addition, many countries lacking colonies such as Sweden in the late 19th century, Greece in the mid-20th century as well as China in recent years, experienced smart economic development without colonies (Close, 2016; McCloskey, 2010). And the UK actually did better economically after divesting most of its colonies in the years after the Second World War (McCloskey, 2010). In short, countries did not become wealthy by conquering or stealing from poor people.

Thrift and Max Weber

If expropriation, plunder, or colonies did not yield industrial revolutions and the fast upturn in economic growth in those "capital-rich" countries, what other capital-related explanation has been made? Others have argued that it was not tribute or plunder, but capital accumulation in the form of thrift that creates an economic take-off (Lucas, 2002; Piketty, 2014; van Zanden, 2009; Weber, 1930). The starting point, this view argues, was a rise of thriftiness and hard work among the Dutch and English Puritans the 1700s, yielding the capital needed for the economic improvements of the 1800s (Weber, 1930). Max Weber used the construct of the Protestant work ethic to explain increased savings and industry and the rise of industrial capitalism. Yet the takeoff of

industry came only around the start of the nineteenth century, some three hundred years after the Protestant movement that Weber chronicled. It is true that the presence of Protestantism is directly correlated with economic growth, but not until after 1870, many decades after the Protestant work ethic should have started operating (DeLong, 2016). Moreover, the economic takeoff occurred initially in Britain and North America, rather than in the central Europe of Martin Luther and John Calvin.

Regarding long-term saving rates and investment, those of Italy or China and several other countries were about the same as in Northern Europe for extended periods of time during and after the Middle Ages which similarly failed to confer economic takeoff and growth (McCloskey, 2010). In addition, empirical data has emerged showing that Medieval farmers in Europe actually saved more than their 18th and 19th century counterparts (McCloskey, 2006). And recent research has further uncovered British investment in physical capital as a share of national income was actually significantly below the European average in the 1700s, only rising to European norms late in the 19th and early twentieth centuries (Crafts, Leybourne, & Mills, 1991; Mokyr, 2010). Indeed contrary to Weber's (1930) arguments on thrift and development, the proportion of British savings as manifest in investment in physical capital (as a share of national income) was actually significantly below the European norm for decades. For example, it was only 4% in 1700, as opposed to 11% in western and central Europe during the Industrial Revolution and the early economic takeoff period. And later in the 1800s, British investment and savings as a part of national income was still below European averages (Crafts et al., 1991).

Regarding Britain's growth, recent research on local investment there has also shown that large amounts of capital were not required for most factories steam works until the late 1800s, which was well after the thrift and capital accumulation were purported to have seeded British economic growth (Mokyr, 2010).⁵ Basically, the timing does not follow: Britain's investment figures showed about the same if not lower than the European countries around it, and capital was not a major factor in most nineteenth century industries (McCloskey, 2017). Weber's Protestant work ethic and thriftiness are certainly useful societal qualities, but they fail to explain the economic takeoff of The Netherlands, Britain, the US, Sweden and several other countries for which the ethic had been long present (McCloskey, 2010). Similarly, there is, little of the negative picture of British failure to invest later (McCloskey, 1970) as suggested by business historians (Chandler, 1990). The alternative is a picture of an economy not stagnating but growing as rapidly as permitted by the availability of resources and the effective application of the available technology (McCloskey, 1970; Mokyr, 2010). Basically, nineteenth century Britain did not succeed because of high savings and investment (it was lower than other parts of Europe), nor of plunder (Spain and Portugal had done much more but failed to grow much economically) nor because of colonies (Britain grew faster after divesting her colonies in the years after the Second World War) (McCloskey, 2013). Nor did Britain suffer so-called failure later because of a lack of savings or investment (Mokyr, 2010). The capital accumulation (or not) argument depends on much else such as the effective use of capital, smart strategies and governance, and productive institutions so that capital is effectively applied and safeguarded

⁵ Cotton factories in the early decades of the Industrial Revolution were not capital-intensive (Pollard, 1964).

in its work, and yields productive innovation (Acemoglu & Robinson, 2012; Mokyr, 2010; Sadun, Bloom, & Van Reenen, 2017; von Tunzelmann & Wang, 2007).

Capital accumulation, whatever the source, can produce a limited return, often for several decades. But if not carefully reinvested in sustainably productive enterprises, and innovations, the accumulation erodes, as it did in Spain by the 1800s (Boulding, 1958; Bhide, 2008; McCloskey, 2010). In addition, a key problem with this view is that capital comes in many forms, and it does not always go up in value or throw off regular returns. As a practical matter, physical capital financed from stealing gold and silver from the locals or socking away savings does not amount to much economic growth or firm development without the creation of productive new assets and the improvement of managerial, marketing, governance, and the technical routines to properly employ the assets (Christensen et al., 2019; McCloskey, 2013; Sadun et al., 2017; Young et al., 2008). Capital, whether financial or otherwise do not always accumulate as Piketty (2014) has argued, it also depreciates, get damaged, stolen, or otherwise becomes obsolete (Boudreaux, 2017; McCloskey, 2013). And as Keynes observed in 1936, anticipated by Schumpeter (1912), savings in the absence of innovation will essentially deprive “capital of its [productive] scarcity-value within one or two generations” (Keynes, 1936: 16).

International trade and transportation

If geography and significant capital failed to seed the growth takeoff of firms and economies, maybe the increased trade of the nineteenth century led to the growth yielding innovation, and productivity improvements of the 19th and 20th (and now 21st) centuries. Concerns about China’s Belt and Road project or tariff increases in the early decades of the twenty-first century hindering economic growth, suggest the extent to which international trade is thought of as a fount of growth and development. This view emphasizes the role of international trade and subsidiary items like transportation as drivers of productivity change and income growth and has been called the “integration view” because it gives participation in the larger global economy a key role in fostering economic growth and convergence (Rodrik et al., 2004).

Yet the largest sea trade until fairly recently was around the Indian Ocean and the waters in Southeast Asia, not the Atlantic or the Pacific, with significant land and sea routes around Rome in the first millennium with no signs of a sustained take-off in economic growth occurring among its participants (McCloskey, 2010). More recently, empirical studies of economic growth and integration (including international trade) on its own, show little direct effect on incomes, (much as geography also has little or no direct effect on income) (Rodriguez & Rodrik, 2000; Rodrik et al., 2004; Rodrik, 2017). Generally, there is little clear evidence that more open trade policies the way free trade is practiced today, such as in the sense of lower tariff and nontariff barriers to trade, contribute much to economic growth (McCloskey, 2010). Likewise tariffs also play little role in slowing growth (Rodriguez & Rodrik, 2000).⁶

⁶ Similarly, research has shown that the railroads in the US provided little additional economic effect above alternative transport methods such as established land routes and canals. They facilitated certain businesses such as meat packing, but the effect on GDP was minor (Fogel, 1964; McCloskey, 2010).

The empirical results on trade are very robust in that they do not change within a range of modifications in studies such as different samples, alternative measures of geography, trade and different integration measures as well as across different control and instrument variables (Rodrik et al., 2004; Rodrik, 2017). Similarly, as enough data are gradually becoming available on trade agreements, studies are demonstrating they are not particularly effective in enhancing firm competitiveness and or economic growth either (Rodrik, 2017).

For example, the North American Free Trade Agreement (NAFTA), enacted in 1994, is one of the early regional trade agreements. Caliendo and Parro (2015) provide a systematic evaluation of its effects on the economy's productivity, firms and labor. They found that NAFTA increased US GDP since its enactment by less than one tenth of 1%. In terms of the impact on labor, their study showed a key segment of US workers suffered substantial income losses; the effect was greatest for blue collar workers in heavily NAFTA-impacted localities. The blue collar workers had 8 percentage points slower wage growth over the final decade of the twentieth century compared to similar workers not directly impacted by NAFTA-related trade. Wage growth in the (previously) more sheltered industries that lost their quasi-protection fell even further—by 17 percentage points relative to industries that were unprotected initially. Similar findings show that Mexico did not benefit greatly either from the NAFTA agreement. Other research on trade agreements, though in a fairly early stage, also suggest weak effects on incomes and GDP (Rodrik, 2017). International trade and trade agreements are good to have but seem to add little directly to economic growth. Trade's efficiency gains are certainly desirable, but they are small when put on the scale of a 3000 to 10,000% improvement in income and living standards as has occurred during the Great Enrichment of the past two centuries (McCloskey, 2010). Nevertheless, increased integration in the form of trade and FDI can contribute if productive, integrative institutions are also transferred with trade (Acemoglu & Robinson, 2012; Rodrik et al., 2004). International trade may have some indirect effects through FDI as well (Hitt, Ahlstrom, Dacin, Levitas, & Svobodina, 2004; Rodrik, 2017). Indeed, recent major studies on cross country spillovers also show the benefit of trade as it affects inclusive institutions, and the transfer of know how and good managerial techniques which are likely to add to economic growth (Bender et al., 2018; Bloom et al., 2018).

The role of inclusive institutions and growth

Research on institutions and their role on firm and economic performance has developed significantly in recent years (Acemoglu & Robinson, 2012; McCloskey, 2010; North, 1990; North, Wallis, & Weingast, 2009). An influential view regarding the key causes of productive innovation and economic growth suggest that innovation and growth emerge and are sustained partly by inclusive institutions, that is, the rules of the game and their acceptance (Acemoglu & Robinson, 2012; Acs, Audretsch, & Strom, 2009; Bruton, Ahlstrom, & Li, 2010). The role of property rights and the rule of law, and also their wide acceptance in a society is deemed very important to economic growth through firm formation and productive innovation (Ahlstrom, 2010; McCloskey, 2010; North, 1990). In this view, what matters are the rules of the game in a society, as defined by prevailing explicit and implicit behavioral norms and their ability to create appropriate incentives or accepted paths for desirable economic

behavior (Scott, 2013). Empirical research has shown that moderate increases in institutional quality can produce large increases in per capita income (Rodrik et al., 2004).⁷

Acemoglu and colleagues (Acemoglu, Johnson, & Robinson, 2001) also found that there are substantial economic gains from improving institutions; for example as in the case of South Korea during the 1960s and after the Asian Financial crisis or China since 1978. The difference between the quality of institutions (using a standard measure) in Bolivia compared with South Korea is equivalent to one standard deviation in measured institutional quality, which predicts a six fold difference in terms of explained income. In other words, if Bolivia were to successfully improve its institutions to the comparable quality of Korea's, its GDP would be predicted to rise to about \$40,000 rather than its level of about \$7000, which is roughly the actual per capita income of the two countries, thus providing further support for the importance of quality institutions and economic growth (Rodrik et al., 2004; CIA World Factbook, 2017).

Strong institutions also help to provide stabilizing and legitimizing functions for firms, controlling corruption, improving property and encouraging the founding of firms (Baumol, Litan, & Schramm, 2007; Peng, 2003; Rodrik et al., 2004). The experiences of a number of African countries are instructive. Some fifteen sub-Saharan countries grew at rates exceeding 2.5% annually in the years up to 1973. But, because of weak domestic institutions, few were able to withstand the effects of the oil price increases and other macroeconomic shocks in the 1970s, so growth leveled off and GDP actually suffered some declines well in the 1980s and 1990s (Rodrik, 1999), only returning to solid growth fairly recently. The same is true for Greece which actually had China-like rapid growth for many years from the 1950s into the 1980s, with Greece's growth rate often exceeding 10% in those years (Close, 2016). But fast growth in the absence of institutional reform often proves to be unstable. In many fast growth countries of the 1960s and 1970s, growth was typically interrupted by upheavals, inflation, and poor policies (Close, 2016; Sharma, 2017). Greece's per capita income actually declined in 2008–2010 back to 1990 levels, only to start recovering recently, though debt and other fiscal problems have dogged the economy (Close, 2016).

Institutions and entrepreneurship

As institutional quality has been shown to be quite important, much recent work on institutions and economic growth has focused on the importance of a particular set of institutions, namely, those that protect property and contractual rights and also those that encourage competition and legitimate success, rather than punishing it (Acemoglu & Robinson, 2012; Acs et al., 2009; Bruton et al., 2010; North, 1990; Peng, Ahlstrom, Carraher, & Shi, 2017a, 2017b). That is, constructive, inclusive institutions preserve not only growth, but encourage entrepreneurial opportunity seeking. New ventures are influenced by the laws and rules as well as the social validation afforded by the society that permits entrepreneurs to operate more freely, as opposed to the honoring of only nobles, knights (including “new” knights like crusading lawyers or law enforcement), and celebrities (McCloskey, 2010). In short, recent research has shown that good institutional systems (both formal and informal) also matter for entrepreneurship, and subsequent

⁷ Even macroeconomic policies do not have much effect on incomes, after controlling for institutions and their quality (Easterly & Levine, 2003).

economic growth (Acemoglu & Robinson, 2012; Bruton et al., 2010; Rodrik et al., 2004; Zhu, Wittmann, & Peng, 2012). This has particularly been demonstrated with the economic growth in China and India in recent decades, heavily seeded by improved productivity and new venture development (Ahlstrom & Ding, 2014; Jain, Nair, & Ahlstrom, 2015).

Institutions and innovation

Institutions not only can encourage new venture formation through IP protection and financing, but can also encourage innovation itself, by reducing the tendency to suppress innovation and subsequent firm development (Christensen & Raynor, 2013; Mokyr, 1992). Market stabilizing institutions are helpful here including regulatory agencies for data and telecommunications, transport, and financial services. Related institutions in finance lower firm cost of capital and encourage capital investment and R&D while minimizing macroeconomic volatility, corruption and financial crises (Acemoglu & Robinson, 2012). This even goes back to the Middle Ages whereby the institutions of the Holy Roman Empire contributed to stronger market integration north of the Alps, and hence more investment and commercial activity (Chilosi, Schulze, & Volckart, 2018). Effective and uncorrupt central banks, exchange rate regimes, and budgetary and fiscal rules all play key roles encouraging investment, particularly in the financing of new product development in industries where venture and developmental capital are essential (Acemoglu et al., 2001; Lerner et al., 2012). Inclusive institutions maintain stability and property rights and allow equal access to economic opportunities which promotes the development of new ideas and businesses (Acemoglu et al., 2001).

As opposed to inclusive, productive institutions, societies that operate under extractive institutions create an economic environment that aims to sustain the status quo and avoid change. This makes new ventures and even new innovation more difficult. New ventures are restricted and entrepreneurs are punished for their wealth and disruptive innovation in such environments (Mokyr, 1992). Societies have had numerous barriers to innovation and new ventures throughout history (McCloskey, 2017; Ogilvie, 2019; Phelps, 2009). For example, though guilds are not very common today, they are illustrative of barriers to market entry and innovation that still can persist today (Dunbar & Ahlstrom, 1995; Garud & Ahlstrom, 1997; McCloskey, 2017; Ogilvie, 2019; Wang, Ahlstrom, Nair, & Hang, 2008). Guilds originated in the Middle Ages and were associations of merchants or artisans formed to control their trades and production. In the late eighteenth century, guilds were still widespread in the German principalities and many other places in Europe (Ogilvie, 1996). On the one hand, guilds ensured certain quality standards with regard to both the education of their craftsmen and the quality control of their products, but on the other hand, they acted as gatekeepers and an impediment for change and innovation by protecting the interests of the existing members and the local elites (Ogilvie, 2011, 2019). Several case studies show that guilds or their allies in government often directly prohibited the use of improved production techniques and novel products in order to maintain the status quo in their craft. In the seventeenth century, for example, the use of semi-automatic looms for the production of silk ribbon was mostly prohibited in Cologne, Frankfurt and other major centers of textile production in the German principalities. Many other regulations against innovation and regional trade existed and often persisted for centuries (Mokyr, 1992).

Before the decline of the guilds in the 1800s, the incentives to generate economically valuable inventions were limited since it was difficult for the inventor to realize the resulting economic gains. Moreover, guilds did not only directly prevent innovation in craft, but also restricted entry and limited internal trade and competition (Ogilvie, 2011, 2019). Guilds acted like cartels controlling local monopolies and taking significant tolls on regional trade. This can be further illustrated by a case of an eighteenth century entrepreneur in Württemberg who wanted to construct a cotton spinning mill in the western German city of Urach, but city officials refused his request for a license so as to protect the local linen weavers (Arns, 1986). Many other examples of guilds or local city councils and nobility preventing innovation exist in Europe and China in the Middle Ages (Landes, 1998; Mokyr, 1992).

Capital-intensive industries such as iron works or dinnerware manufactories were typically not part of guilds but had to acquire trading licenses to do business instead. The licenses were expensive and were only occasionally distributed by the rulers, much like taxi medallions today. Similarly, the old patent system in western Europe was also run at the favor of the royals (hence the term royalty payments), and only in the 1700s did reform and the development of intellectual property laws spread in earnest (Peng et al., 2017a, 2017b). Entrepreneurs often had to rely on the goodwill of city officials or nobles in Europe (and China) to get licenses to operate, but these were by no means certain. Entrepreneurs were even sometimes executed by cities seeking to prevent entry of new production processes or competitive innovations (Mokyr, 1992). Requests were rejected for various reasons, including when the proposed business plans challenged the economic interests of incumbent firms, government linked companies, or royal interests, whether in the eighteenth century or the 21st (Bruton, Ahlstrom, & Obloj, 2008; Landes, 1998; Li, Yao, & Ahlstrom, 2015; Nair, Ahlstrom, & Filer, 2007). Extensive licensing systems still persisted well into the twentieth century in major economies such as India, and restrictions on business start-ups periodically reemerge in the numerous fees and cumbersome applications and state or provincial licensing systems (Bruton et al., 2008; Bhagwati & Panagariya, 2012; De Soto, 2000; Molloy, Trezzi, Smith, & Wozniak, 2016; Nair et al., 2007; Young, Ahlstrom, Bruton, & Rubanik, 2011).

The institutional reforms initially in northwestern Europe and later in North America and East Asia assisted innovation and new venture creation by removing many of the barriers to internal trade and the introduction of innovations and production techniques; and improving the ease of starting a business. An efficient legal system guaranteeing equal rights through the introduction of an enforceable commercial code fostered incentives to innovate so intellectual property rights could not be overly limited or appropriated from innovators (Peng et al., 2017a, 2017b). The weakening of the old craft and merchant guilds from the Middle Ages (and likewise the License Raj in India in the late twentieth century) similarly established more innovation-friendly and competitive environments (McCloskey, 2017), which replaced obsolete medieval economic systems based on favors, local monopolies, and restricted internal trade, guilds, and overly restrictive unions that had hindered (and still can hinder) the introduction of new production techniques, work processes devices, and services (Mokyr, 1992; Ogilvie, 2011, 2019).

This is by no means a bygone problem. As late as the 1980s, computers were difficult and expensive to acquire in India. Moving large machines are factories there to take advantage of a new production process required the approval of the Indian government (Bhagwati & Panagariya, 2012). Empirical evidence dating from

Renaissance Germany up to the present in emerging economies show that the introduction of institutions that were more inclusive and facilitated the reduction in barriers to trade and innovation, eventually creating more growth and prosperity (Baumol et al., 2007; Mokyr, 1992; Rodrik et al., 2004). These new institutional laws and regulations prevented nobles or powerful guilds (or state linked entities stifling local competition) from taking possession of an innovation or shutting down the operation to produce it (Mokyr, 1992; Ogilvie, 2019).

Institutional reform in northern Europe and the US created an economic environment more conducive to innovation. Similar reform has happened in China and India, though much later in the twentieth century. Some limits to the development of innovative and higher productivity products, which date back to the Middle Ages, still persist into the twenty-first century as restrictive union work rules, immobilizing of labor markets and restrictions locking out new entrants to an industry (such as Uber or Airbnb) (McCloskey, 2017; Molloy et al., 2016). To promote economic growth, governments seek to make a convincing and credible commitment that the market stabilizing and market creating policies will be maintained in the future and restrictions to productive innovations and labor mobility will be minimized.

MNEs as carriers of effective economic, contractual, and informal institutions

Although international trade and trade agreements have little direct impact on economic growth, research suggests that improved integration through trade and FDI in particular can have a positive impact through quality formal and informal institutional transfer as well as the transfer of technology and managerial knowhow (Rodrik et al., 2004; Ahlstrom, Bruton, & Yeh, 2007; Bender et al., 2018; Bloom et al., 2018). In general, studies of the impact of MNEs on host country competitiveness or performance hypothesize that MNEs activity should bring competitive capabilities to their host countries such as enhancing the export competitiveness of host countries and industries. MNEs can also carry good institutions regarding improved corruption practices or bankruptcy laws as well as helpful management practices to their new countries through trade and FDI (Lee, Yamakawa, Peng, & Barney, 2011; Li et al., 2015; Sadun et al., 2017).

In MNCs, subsidiaries face mimetic pressures for conformity with their parent, though sometimes with host country organizations as well (Galaskiewicz & Wasserman, 1989). When establishing a new subsidiary in a new country, managers of the parent unit face additional uncertainty based on less information and experience than local personnel, requiring more monitoring, coaching and control (Ahlstrom & Bruton, 2009; Ahlstrom, Bruton, & Chan, 2001; Guillén, 2003). In this situation, they have incentives to copy the practices of the parent and other subsidiaries within the MNE to reduce uncertainty. Likewise, subsidiary managers face uncertainties in managing operations, particularly the newer ones run by expatriates. Thus subsidiary managers may seek to simply replicate the practices and control systems of the parent or older foreign subsidiaries within the MNE to enhance internal legitimacy (Kostova & Zaheer, 1999).

Adoptions of organizational practices by MNE subsidiaries may also bring new economic institutions and managerial approaches to the foreign subsidiary and even to its industry locally (Ahlstrom & Bruton, 2009; Buckley & Casson, 2002). Westney (1993), for example, pointed out that MNE subsidiaries in some countries play a major

role in establishing improved organizational and innovation practices. She held that the dominance of foreign-owned subsidiaries in Canada and Australia was a major, early influence on the institutionalization of more systematic R&D there. Local firms have been known to pick up on routines introduced by an influential MNE or professional organization and sometimes institutionalized by local governments (Ahlstrom & Bruton, 2009). Recent evidence shows that firms have been able to strongly differentiate themselves while enhancing productivity through effective management and control routines (Bloom et al., 2018). This includes practices such as improved quality management, internal corporate venturing, and high performance work systems (Ahlstrom & Bruton, 2009; Bruton & Ahlstrom, 2003). Inclusive, productive institutions coupled with proven organizational routines can help yield big gains in productivity and product performance, if they are adopted and not locked out by local elites that feel threatened by such change (Acemoglu & Robinson, 2012; Bloom et al., 2018).

Sometimes it takes an influential MNE with extra legitimacy to introduce the institutional practice. California contract law regarding venture capital and IP was brought by international venture capital firms to China, and is often legally accepted there as part of venture and private equity deals (Bruton & Ahlstrom, 2003). This reportedly has helped venture capital in China (Ahlstrom et al., 2007). Similar activity for microfinancing has been brought to emerging economies by banks migrating around South Asia and bringing their practices and contracts along with them (Chen et al., 2017).

Similarly, integration benefits through the trade and investment of multinationals also comes in terms of less formal institutions that lead to improved management (Sadun et al., 2017). Rosenzweig and Singh (1991) provided an organizational example in Hong Kong. Upon opening a luxury hotel there, Marriott implemented a five-day workweek which it uses all around the world, versus the east Asian norm of a five and a half day work week. Despite protests from the local hoteliers association, the change stuck. Other changes like ending the thirteenth month automatic bonus in favor of a pay for performance system was implemented by foreign hotels in Hong Kong. After much resistance, these informal routines have been widely adopted and are often preferred by new employees in Hong Kong (Ahlstrom & Bruton, 2009; Chen & Ahlstrom, 2017). And in the twenty-first century, there are few guilds to stop such human resource and other process innovations as there likely would have been if such changes had been sought in the 1700s instead. Langlois and Schlegelmilch (1990) added that writing codes of ethics is a originally an American practice, and has made its way to Europe via the subsidiaries of US firms. Similarly this has occurred more in Asia for ethics codes and HR (Chen & Ahlstrom, 2017; Kuen, Nesbit, & Ahlstrom, 2013), and new standards in China on private equity, venture capital and intellectual property (Peng et al., 2017a, 2017b).

In short, institutions that can help encourage market development are inclusive, market creating institutions (Acemoglu & Robinson, 2012). They are often called market-creating institutions because in their absence, markets perform poorly or fail (Baumol et al., 2007). Evidence has emerged showing that long-run economic development is facilitated by market creating institutions such as financing and property rights, industry safety standards, and aids to labor mobility and training (Acemoglu & Robinson, 2012; Baumol et al., 2007; Molloy et al., 2016). These help to raise investment and entrepreneurship (Bruton et al., 2008; Newman, Schwarz, &

Ahlstrom, 2017). Inclusive, market-creating institutions coupled with market-regulating ones noted earlier can help to sustain growth in an economy, build resilience to shocks, and facilitate socially legitimate responses to such shocks (Bhide, 2008; Rodrik, 1999). Institutions at an economy-wide level further contribute to economic growth by safeguarding property rights, encouraging financing and labor markets, reducing transaction costs and encouraging and socially validating new venture creation (McCloskey, 2010, 2017). Although international trade adds little directly to economic growth (Rodrik, 2017), trade and the activities of MNEs help inclusive institutions and strong organizational routines to cross national borders and help encourage economic growth more widely.

Discussion

Two centuries ago, the average per capita income in the world stood at around \$1000 in current US dollars and less in many countries. During the nineteenth century, incomes rose steadily in Western Europe, North America, and later Japan, spurred by new inventions, innovations, and significant institutional changes that afforded entrepreneurs and their innovations protection and the opportunity to flourish. Incomes (and purchasing power) improved by 3000 to 10,000% over the past two centuries with concomitant improvements in health and standards of living (Rosling et al., 2018). Nor is growth slowing; to come to such a conclusion, one would have to exclude the strong and steady economic and company growth in China and India, which represent about 40% of the world's population. Moreover, the world's poor are not paying for the growth. Pinkovsky and Sala-i-Martin (2014) have shown on the basis of detailed study of the individual distribution of income that world poverty is falling. They also measure poverty at the individual, person-by-person level as well as country-by-country (the two methods come to much the same conclusion). Basically between 1970 and 2006, the global poverty rate (defined in absolute, not relative or comparative terms) has been cut by nearly three quarters and has continued to fall, though much work remains (Banerjee et al., 2015; Bruton, Ahlstrom, & Si, 2015; Pinkovsky & Sala-i-Martin, 2014). The Great Enrichment of the past two centuries has led to not only increasing incomes and declining inequities, but has also provided the middle-class and even many of the poor easy access to numerous goods and services including nearly free international phone calls, air-conditioning, safer food and water, and good basic healthcare; things that our ancestors could not even dream of.

Careful empirical and historical research in recent years has clarified considerably the main causes of this Great Enrichment. Previously popular explanations of the causes of economic divergence among countries and continuing growth such as geographic advantages, capital accumulation and its variants (colonialism, plunder, thrift) have been shown to be inadequate (McCloskey, 2010). And in spite of the benefits of trade, its expansion (and related improvements in transportation), though certainly desirable, did not contribute much to economic growth (Fogel, 1964; McCloskey, 2010, 2017; Rodrik, 2017). Such causes of the economic growth may contribute a little to betterment, but are not able to explain the 3000 to 10,000% improvements in income and standard of living in many countries and the significant reduction in poverty worldwide caused largely by productive innovation and the

creation of new ventures and new markets (Ahlstrom, 2010; Christensen et al., 2019; McCloskey, 2017).

As productive innovation and new venture creation are proximate causes of firm and economic growth, the question is, how do investors and policymakers impel such productive innovation, new venture creation and development? Recent research in a range of disciplines from economics, to management, to business history suggest the importance of institutions in encouraging productive entrepreneurial and commercial activities and seeding economic growth (Acemoglu & Robinson, 2012; North, 1990; Rodrik et al., 2004). Institutional quality can lead to major improvements in income and the creation and maintenance of productive assets (Rodrik et al., 2004). Recent research has further started to examine the importance of informal institutions working together with formal ones to help to maintain political stability, enhance trade, and safeguard property rights while encouraging productive entrepreneurship (Baumol et al., 2007; McCloskey, 2006, 2010). Informal institutions can work together with formal ones to improve firm performance by decreasing the uncertainty surrounding the implementation of laws and government policies, while providing social validation for innovators and new ventures.

In any case, formal institutions work well not only because of good official rules of the game, they function because they are accepted and legitimized by the participants (Ahlstrom & Bruton, 2001; Christensen et al., 2019). Societies can craft official rules against cheating in business and positive rules to protect (and encourage) business. But they also need the rules of the game to be well-accepted and seen as legitimate, so business and pro-growth rules and other policies can be pursued (McCloskey, 2010, 2017). Entrepreneurial capitalism produces breakthroughs like the automobile, the telephone, the computer, and containerized shipping. These innovations are usually the product of individuals and upstart firms which not only improve productivity, but also create new markets and bring a better quality of life to a wider range of (often less wealthy) people (Ahlstrom, 2010; Christensen et al., 2019). However, it takes quality integrative institutions and (the adoption of) productive organizational routines to spur and sustain competitive, growth oriented entrepreneurial capitalism (Acemoglu & Robinson, 2012; Baumol et al., 2007; Bloom et al., 2018). Trade and related integration have a positive impact on institutional quality and organizational routines as well, confirming empirical findings that trade does have an indirect effect on incomes by improving institutional quality, though not much of a direct impact (Bloom et al., 2017; Rodrik et al., 2004; Rodrik, 2017).

Future research

An open question for future research is the identification of the mediators between more inclusive institutions and innovation as well as the micro foundations through which institutions encourage innovation. For example, shorter and fairer product trials that reduce testing and transaction costs could in turn lead to higher levels of investment in R&D in the healthcare arena. Also at a more macro level, better governance institutions could optimize intellectual property rules to protect innovators without discouraging innovation (Peng et al., 2017a, 2017b). Similarly, research on how licensing rules stop entrepreneurship as seen with the many barriers placed in front of innovators such as Uber or disruptive healthcare providers would be helpful (Christensen, Grossman, & Huang, 2009). A better

understanding of the institutions that facilitate innovation and encourage entrepreneurship can help encourage the growth of firms and economies. In addition an improved understanding of how inclusive and productive institutions as well as improved technologies and techniques can be shared by firms through international trade and FDI can help further unpack the competitiveness of firms and unlock the growth potential of economies (Bender et al., 2018; Bloom et al., 2018). In general, exploring the precise mechanisms that facilitate productive innovation and new market development—particularly bringing goods and services to the poorest consumers—can help researchers and policy makers alike understand the most salient causes of economic growth (Christensen et al., 2019; Molloy et al., 2016).

Conclusion

Two hundred years ago the average person made and consumed approximately 2 to 3 dollars per day and had done so for centuries. Today, the average person in the developed world earns over thirty times that amount. What impacted northwestern Europe and more recently Asia and other parts of the world such that economic growth could take root to the extent it has over the past two centuries? Early attempts by historians, economists and other social scientists usually concluded that either good geography, "better culture," or some type of capital accumulation, plunder or colonialism created wealthy countries (Diamond, 1997; Findlay & O'Rourke, 2009; Marx, 1867). In this view, wealthier countries were either lucky or had somehow cheated the poorer countries on their path to riches.

Yet there is much evidence that now shows that wealthy countries got that way primarily because of what they did (and continue to do) at home, not because of past or present foreign trade, foreign investment, foreign colonies or conquests, or geography. The encouragement and spread of productive innovation, including effective managerial techniques, new venture creation and market development deliver competitive, growing firms, reduced poverty, and overall economic growth (Ahlstrom, 2015; Alvarez, Barney, & Newman, 2015; Bender et al., 2018; Bloom et al., 2018). Innovation and new markets are facilitated by inclusive institutions and those that encourage innovation and prevent its stifling.

Modern economic growth has depended on the invention of entirely new ways of propelling ships, lighting rooms, managing people or making more durable shoes. Institutional reform, creating more inclusive institutions (Acemoglu & Robinson, 2012), particularly those that enable productive innovation and new venture creation (Baumol et al., 2007) facilitate the productive innovation and new ventures and markets that yield economic growth and improved standards of living. Moreover, trade and integration, often through MNEs, play an important part of the process of carrying good, integrative institutions and new technologies and techniques to countries that can benefit greatly from institutional and commercial reforms.

If this paper could have one message it would be to emphasize the importance of institutions—both formal and informal—and their role in encouraging innovation, new ventures, and new markets. The rules of the game are important (North, 1990). However, informal institutions such as culture and the societal validation of innovation and entrepreneurship may be equally important to economic growth and poverty reduction (McCloskey, 2017). Indeed, while much is known about quality formal

institutional systems and their positive effect on economic growth (Rodrik et al., 2004), much more remains to be learned about informal institutions and their operation in validating innovation and encouraging the creation of new ventures and new markets, especially in poorer countries.

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