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Entrepreneurship is not a Binding Constraint on Growth and Development in the Poorest Countries

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Abstract

It is often claimed that entrepreneurship is indispensable for economic growth and development. These claims are mostly generated by scholars working in the field of entrepreneurship and management studies. In contrast, development economics scholars seem to be less concerned about entrepreneurship in the development process Who is right? I show that the arguments and evidence marshalled so far fails to convincingly show that entrepreneurship is a binding constraint on development in the poorest countries. In development economics institutional weakness, not entrepreneurship, is considered by many to be a more binding constraint on development, especially over the long run. However, recent advances at the interface of entrepreneurship and development economics suggest that unpacking the 'black box' nature of institutions may benefit from incorporating an 'entrepreneur'. Thus, even if entrepreneurship is not a binding constraint on economic development, it may still be worthwhile to study entrepreneurship in development as it may improve our understanding of the real binding constraints.

Keywords: entrepreneurship, development, development economics, institutions

JEL classification: L26, O10

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Abbreviations

Least developed countries	LDC
Gross domestic product	GDP
Information and communication technologies	ICT
Ordinary least squares	OLS
Total entrepreneurial activity	TEA
Global Entrepreneurship Monitor	GEM

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1 Introduction

There is substantial poverty and inequality in the world. It is estimated that there are around 1.4 billion extremely poor people, with extreme poverty defined with reference to the international poverty line of US$1.25 per person per day (Chen and Ravallion, 2008). Many of these live in countries labelled as 'fragile states', least developed countries (LDCs) and/or low income countries (Naudé et al., 2008; 2009). A country is classified as a low income country if its per capita income is less than $905 per annum. At present 53 states are classified as low income countries, of which 34 are located in Sub-Saharan Africa. Moreover within and between countries incomes and wealth are very unequally distributed. Consider for instance that the richest 10 per cent of adults in the world own 85 per cent of global household wealth. Of these individuals, almost half live in the US and Japan (see Davies, 2008; Naudé and McGee, 2009).

What explains these disparities in wealth and incomes between countries and within countries? Many nowadays are convinced the answer is generally to be found in the workings of the 'capitalist' system (e.g. Baumol et al., 2007) and more specifically in entrepreneurship. For instance a recently edited text[1] containing chapters by eminent scholars is entitled 'Making Poor Nations Rich: Entrepreneurship and the Process of Economic Development'. As the title suggests, the answer to eradicating poverty lies in 'Entrepreneurship'.

Claims for the economic development prowess of entrepreneurship abound. I have become somewhat of a collector of these claims. Take the following quotes as representative samples:

> 'Victor Hugo once remarked "You can resist an invading army; you cannot resist an idea whose time has come". Today entrepreneurship is such an idea' (The Economist, 14 March 2009, supplement: 6).
>
> '…all economics textbooks talk about the importance of entrepreneurship' (Baumol, 2008: 2).
>
> 'An enduring claim in the field of entrepreneurship is that entrepreneurial activity promotes economic growth and development' (Minniti, 2008: 779).
>
> '…entrepreneurship has been increasingly considered as an important tool for economic growth and innovation across economies, regardless of stage of economic development' (Acs et al., 2008: 265).
>
> 'Entrepreneurship is the main vehicle of economic development' (Anokhin et al. 2008: 117).
>
> 'Entrepreneurship is considered to be an important mechanism for national economic development' (Hessels, 2008: 9)
>
> 'Entrepreneurship has come to be perceived as the engine of economic and social development throughout the world' (Audretsch et al., 2006: 12).

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1 See Powell (2008).

> ‘…the more entrepreneurs there are in an economy, the faster it will grow’ (Dejardin, 2002: 2).
>
> ‘The engine of economic growth is the entrepreneur’ (Holcombe, 1998: 60).

And so on. What is striking about these claims is that they are largely made in the field of entrepreneurship, which had developed as a subdiscipline of management only fairly recently. Herein the main concern is not on development, but rather in understanding the process of entrepreneurship. As admitted by Audretsch et al. (2007: 1–2) ‘management—the academic discipline most squarely focused on entrepreneurship—has typically not considered the implications for the broader economic context’.

In contrast, the discipline dealing with economic growth and development of developing countries proper, the field of development economics, seems to have been less concerned about entrepreneurship in the development process. In Section 3 of this paper I will go into greater depth into the contributions of key thinkers in development economics and substantiate this statement. However for now I can point out that prominent development economics textbooks such as the four-volume ‘Handbook of Development Economics’ and the ‘Leading Issues in Development Economics’ do not contain a single chapter or any substantial section on entrepreneurship. A number of authors have remarked (some even lamented) on this apparent ‘absence’ of the entrepreneur from development (Lingelbach et al., 2005; Naudé, 2008).

If my broad and perhaps slightly stylized description of the current academic entrepreneurship-and-development-landscape contains some accuracy, then the potentially disturbing implication is that either those in the field of entrepreneurship who extol the developmental impact of entrepreneurship have it all wrong, or that those in the field of development economics are missing a fundamental ingredient of the very process they are so concerned about.

In this paper I suggest that both of these implications may be (partly) true. First I will argue with reference to key thinkers in development economics that entrepreneurship has not really been ignored, but that development economists have weighed the entrepreneur and found him or her too light. To be specific, development economists generally do not consider entrepreneurship to be a binding constraint on development. Second, I will show that despite their claims in favour of the economic development prowess of entrepreneurship, the case in the entrepreneurship literature is on very shaky foundations—both conceptually as well as empirically. Indeed, entrepreneurship scholars may actually implicitly be concurring with development economists that entrepreneurship *per se* is not the binding constraint on development.

However, even if entrepreneurship is not a binding constraint on development in the poorest countries, development economists may have underestimated the potential usefulness of studying entrepreneurship closer. This may indeed be the case if one considers the potential role of the entrepreneur in explanations of the role of institutional features in economic development. Institutions are often treated as a ‘black box’ (Chang, 2007). Entrepreneurship may help in clarifying this ‘black box’ explanation for development outcomes. Just because entrepreneurship may not be a binding constraint, it does not imply that its explicit incorporation into development

economics cannot contribute to a better understanding of the way in which institutions affect economic development.

The remainder of the paper will proceed as follows. In the next section I briefly define ’development economics’, ‘binding constraints’ and ‘entrepreneurship’. In Section 3 I argue that the development economics literature has indeed weighed entrepreneurship but found it wanting. Then in Section 4 I show that despite its professed belief that entrepreneurship matters for growth and development, the entrepreneurship literature is still not able to provide convincing explanations and empirical evidence to show that entrepreneurship matter for the poorest countries. In Section 5 I ask whether perhaps entrepreneurship may after all matter for economic growth and development if we unpack the ‘institutional black box’ explanations for economic development. I will refer here specifically to recent work undertaken by the World Institute for Development Economics Research (UNU-WIDER) on integrating entrepreneurship formally into main models of economic growth and development.[2] Section 6 concludes.

2 Concepts and Definitions

For purposes of this paper the main concepts and definitions are that of development economics, binding constraints on development, and entrepreneurship.

2.1 Development Economics

Development economics is the field within economics that is preoccupied with the causes and consequences of the economic development of the poorest countries. As I mentioned in the introduction, poverty and inequality are disturbing features of the modern world. Addressing the economic dimensions of such poverty and inequality, and explaining their differences across countries, has been the task of the discipline of development economics since its establishment as a distinctive subdiscipline in economics after the Second World War. It draws on the methods and body of knowledge of economics to explain the causes of poverty and inequality in less developed economies. Chenery and Srinivasan (1988: xi) noted that these explanations are ‘characterized by competing paradigms rather than a dominant orthodoxy’ and ‘although the core concerns of development economics are clear enough, its outer boundaries are difficult to establish and essentially arbitrary’.

As such there is, despite many convincing explanations and much progress in conceptualizing and measuring economic development, still no ‘unified field theory’ of economic development, nor a single, straightforward explanation of the process of economic development and the determinants of poverty and inequality. At present, a fair assessment of the state of the subdiscipline is that it recognizes the importance of context, of history, of path dependency, and of the role which good institutions and governance play in the making of good development policies. Indeed, in terms of its

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2 http://www.wider.unu.edu/research/projects-by-theme/development-and-finance/en_GB/entrepreneurship-and-development/ as well as the special issue of *Small Business Economics Journal*, 34, forthcoming January 2010) devoted to the integration of entrepreneurship into models of economic development and growth.

emphasis on institutions it has potentially a common area of interest with the rise of institutional thinking in entrepreneurship.

It also has a strong tradition of attempting to formalize these into theoretical constructs based on microeconomic optimization behaviour and of subjecting these to empirically rigorous testing. It has often been remarked that a possible reason for the lack of interest in entrepreneurship in development economics is due to the difficulty of formally modelling a potentially vague concept such as entrepreneurship and due to the lack of adequate and consistent measurement of entrepreneurship. It has also been claimed that development economics' formal models could see no need for entrepreneurship as they assumed perfect information and market clearing. While perhaps true earlier on, this is no longer a valid argument, as development economists have for some time now been assuming imperfect completion and non-market clearing. Indeed, overcoming definition and assumption difficulties. Gries and Naudé (2010) show that entrepreneurship can be usefully incorporated into endogenous growth models with microeconomic optimization behaviour.

Within development economics 'development' involves both an increase in real output per capita, as well as in a structural transformation of the economy, from rural, agriculturally-based to being mainly urban- and industrial-based. In addition, development economics is concerned that such development should be equitable and sustainable, that is it should be shared (inequality should not increase) and not be environmentally destructive (see e.g. Seers, 1972; 1979).

Where entrepreneurship scholars engage with development, their concept of development is more restricted—most often only to economic growth, GDP per capita or employment/productivity growth. They almost never consider poverty/welfare and inequality, and only very rarely the structural transformation of a society.[3] Also, where the entrepreneurship/management literature do take note of structural transformation it often stems from Schumpeter's notion of innovation which leads to 'creative destruction' and which underlies economic dynamics—and as such focuses on associating entrepreneurship with innovation. It sometimes also stems from a simple taxonomy of different 'stages' of development, wherein each stage has by implication a different structure. The foremost example of such a taxonomy in the management literature is Porter's (1990) claim that development goes through three stages namely a factor-driven stage, a efficiency-driven stage and an innovation-driven stage (see also Porter, 2004 for a recent application).

In adhering to Porter's (1990) taxonomy however, entrepreneurship scholars may be doing themselves a disfavour as far as their claims for the centrality of entrepreneurship in development is concerned. This is because (a) all of the requirements for moving from one stage to another either involves coordination or market failures which needs to be overcome by a strong, efficient government, implying that entrepreneurship is not the

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[3] One purpose of the UNU-WIDER project on entrepreneurship and economic development was to consider the neglected relationship between entrepreneurship and welfare, inequality and structural transformation. Three papers from the project in this regard are Gries and Naudé (2010), Kimhi (2010) and Tamvada (2010).

binding constraint, and (b) their association of entrepreneurship with innovation as per Schumpeter also clearly then suggest that entrepreneurship only drives growth in the final stage of development and is as such not a driver (or constraint) in the earlier two stages (many development economists would object to this).

Entrepreneurship scholars also leave themselves vulnerable by using what is essentially a taxonomy to make causal claims, and indeed a taxonomy for which actually very little empirical support can be marshalled. Consider for instance that the innovation stage is supposed to be characterized by 'decreases in the share of manufacturing in the economy' (Acs and Szerb, 2009: 5). Despite this requirement the share of manufacturing in the USA (one of the most advanced and innovative economies on any measure) has been constant at around 22 per cent for more than 30 years. And many poor countries do indeed seem to have important elements of being innovation driven: Brazil is a global pioneer in bio-fuel technology and in a poor country such as India (with only 8 per cent of the per capita income of the USA) high growth rates in excess of 6 per cent per annum have been driven by innovation in ICT (Mani, 2008). The same could be said of China, one of the world's largest and fastest growing economies: almost half of all innovative new goods imported by the USA come from China (Puga and Trefler, 2008), a country neither noted for its entrepreneurial or capitalist culture, not for its freedom, liberties, or clear property rights, that are advocated in books such as *Making Poor Nations Rich* advocate.

2.2 Binding Constraints on Development

By binding constraints I mean constraints on economic growth and development which, if relieved, would have a more significant impact on promoting growth and development than other constraints. Binding constraints, as long as they remain in place, would hinder growth, even if other possible constraints or determinants of growth are addressed.

The idea of constraints that are 'binding' is of course to be find in some of the earliest thinking in development economics, for instance as in Albert Hirschman's (1958) advocacy of 'unbalanced' growth wherein he advocated that governments should identify and support leading sectors, which are those with the most forward and backward linkages in the economy. It is also implicit in the literature on poverty traps, whereby processes out of poverty often follow non-linear dynamics, with threshold effects that would require external intervention in a certain area to 'push' a household or country over the threshold (see e.g. Murphy et al.,1989).

More recently the idea of binding constraints have been given further emphasis by Hausmann et al. (2005: 2) who argue that coming up with long washing-lists of policy prescription for governments to promote growth is unpractical:

> '...it is seldom helpful to provide governments with long lists of reforms, many of which may not be targeted at the most binding constraints on economic growth. Governments face administrative and political limitations, and their policy-making capital is better employed in alleviating binding constraints than going after too many targets all at once. So growth strategies require a sense of priorities'.

Put this way, asking whether or not entrepreneurship is a binding constraint on economic growth and development is to ask whether it should be a priority in the growth strategies of the poorest countries. The discussion in Sections 3 and 4 suggests not.

2.3 Entrepreneurship

While there are many definitions of entrepreneurship, and it is studied in many different disciplines, the conceptual definitions at least have little suggestion or implication that entrepreneurship may be important for economic growth and development—indeed in some cases quite the contrary.

A widely used definition sees entrepreneurship as the 'discovery and exploitation of opportunities' (Shane and Venkataraman, 2000). This is very broad, and does not imply that the 'discovery and exploitation of opportunities' may influence national economic development outcomes. Some definitions more narrowly see entrepreneurship as the utilization of opportunities through the creation of new business firms. Accordingly Hart (2003: 5) defines entrepreneurship as the 'process of starting and continuing to expand new businesses'. There is a fundamental belief amongst many entrepreneurship scholars, and I suspect this due to Schumpeter, that the most distinguishing task of the entrepreneur is to innovate. New businesses are therefore seen as the way in which entrepreneurs bring new innovations to market. As I have pointed out in the previous section, the equation of entrepreneurship with innovation under the (mistaken) view that innovation-driven growth is only possible at an advanced stage of development leads to the inevitable conclusion that entrepreneurship is not a driver of growth in poor countries, and that levels and activities of entrepreneurship should be higher the higher the stage of a country's development.

Entrepreneurship is however not only concerned about new firms. Many have applied the idea that entrepreneurs exploit opportunities in the firm context to argue that entrepreneurship is in fact part of the management function within existing firms (Hitt et al., 2001) and to coin the term 'intrapreneurship', which is the 'pursuit of creative or new solutions to challenges confronting the firm' (Antoncic and Hisrich, 2001: 495). Again, valid definitions in their own right, but no implications for national economic growth and development.

More recently some within the entrepreneurship field have argued that entrepreneurship needs not exclusively or predominantly be concerned with new firm creation or behaviour within firms. An oft-quoted definition of entrepreneurship in this regard is by Baumol (1990: 987) who defines entrepreneurs as 'persons who are ingenious and creative in finding ways that add to their own wealth, power, and prestige'. From this he draws the implication that not only may there be no relation between entrepreneurship and economic growth, but that entrepreneurship may have a negative impact on economic growth and development.

Henrekson (2007: 719) in a similar vein proposes that 'entrepreneurship can be seen as a continual quest for economic rents, i.e. rates of return exceeding the risk-adjusted market return'. He describes (2007: 729) the sources of 'Ricardian' rents (and their short term equivalents of 'Marshallian' rents) such as access to natural resources,

patents, and tacit knowledge, and points out that these rents can be obtained through many different means: from innovative activities to bribes.

For present purposes this may be an important implicit acknowledgement from the entrepreneurship field that entrepreneurship may not be a binding constraint on development. For as pointed out by Coyne and Leeson (2004: 236), the fact that rents are attached to activities that may be productive or destructive strongly suggests that underdevelopment may perhaps not be due to an insufficient supply of entrepreneurs, but rather due to a 'lack of profit opportunities tied to activities that yield economic growth'.

3 Development Economists on Entrepreneurship: Weighed But Found Wanting?

In the previous section I dealt with the definitions and concept of 'entrepreneurship'. This is somewhat distinct from the roles that are often ascribed to entrepreneurs. It is often based on these roles that scholars argue that entrepreneurship matters for economic growth and development. For instance, the roles of entrepreneurs may include everything from the reallocation of resources from low productivity uses towards higher productivity uses (Estrin et al., 2006), assuming risk, to the provision of diversity, goods, and services, as well as providing an environment for learning, experimentation, innovation, and competition (Sternberg and Wennekers, 2005).

Development economists' views have tended to be that this may amount to a 'cover up' explanation for an important economic phenomenon, by ascribing it to an 'entrepreneur'. Thus many would be unconvinced that entrepreneurs are essential to reallocate resources towards higher productivity uses, citing many instances where the opposite has occurred—not only in developing countries, but most recently as the subprime crisis in the US has shown.

And whereas development economists would recognize the importance of job creation, risk-taking, learning, innovation, experimentation, and competition, they would see the provision of these goods and services as being the outcome of many different possible organizational forms (e.g. Sun, 2003). By seeing these as the outcome of individual 'entrepreneurship' may obscure the many rich organizational forms through which human societies in different places and times have solved the provision of these goods.[4]

Thus although entrepreneurs are fulfilling useful functions, the lack of entrepreneurs to fulfil these functions may not pose a binding constraint. Indeed, development economists recognize that there are large numbers of entrepreneurs in developing countries, many of them in the informal or survival sector. These entrepreneurs are however, no constraint on development, nor a significant driver of growth (Beck et al., 2003) although they do alleviate poverty (Berner et al., 2008). Rather, many development economists see them as a symptom of other constraints in the economy (see e.g. De Paula and Scheinkman, 2007; Ihrig and Moe, 2004; Maloney, 2004), and

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4 For instance as is illustrated in the volume edited by Liaxiang Sun 'The claim that private investors should own the firm is not the logical consequence of free markets and free enterprise' (Sun, 2003: 1–2).

Banerjee and Duflo (2007: 162) cautions that 'it is important not to romanticize these penniless entrepreneurs'.

If not entrepreneurship, then what are the views of development economists on the binding constraints to development?

In Appendix Tables 1 to 3 I summarize the views of selected key contributors[5] to development economics since its origins after the Second World War, thus between 1940 and the present. These tables are only intended to provide a broad overview of some of the most notable contributions to the overall subject matter of development economics and is not meant in any way to be exhaustive of either the contributors or of their thinking.

There are three tables in the Appendix, each corresponding to a broad stage in the evolution of development economics over this period. There is fair agreement in the literature that the field has gone through these three stages, which, following Meier and Rauch (2000: 421) and Nayyar (2008: 260) can be described as the

(a) 'Development Consensus' phase from 1940 to roughly 1980.
(b) 'Washington Consensus'[6] phase from 1981 to 2000.
(c) The current post-Washington Consensus phase, 2000–to the time of writing.

The three phases reflected in Appendix Table 1 to 3 are indicative of the fact that development economics as a discipline is characterized by different ideological viewpoints, and that the discipline evolved (and the dominating viewpoints) in reaction to actual economic outcomes. An excellent exposition of the phases of development thinking after the Second World war is contained in Szirmai (2005).

Nayyar (2008) states that state-orientation after the Second World War was partly a reaction against the colonial legacy of free markets and the exploitation of natural resources. The 'Development Consensus' phase was, as Appendix Table 1 indicates, particularly concerned with the structural economic transformation of poor economies through industrialization. As column two implies, thinking about structural change, market failures, and international inequalities dominated thinking during this period. As a result the need for strong government intervention was promoted.

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5 Any selection of 'key contributors' to a rich field such as development economics is likely to be subjective. In the present case I have been guided in my selection by the contributors recognized in recent overviews of the development of development economics, such as Chenery and Srinivasan (1988), Meier and Rauch (2000), Meier and Stiglitz (2001), Secondi (2008), Simon (2006) and Szirmai (2005).

6 The term 'Washington Consensus' is meant to refer to a set of policy prescriptions for growth in developing countries which were associated mostly with the IMF and World Bank and related economists' views, and which include adherence to fiscal and monetary discipline, liberalization of trade and financial markets, privatization of state-owned enterprises and enforcement of property rights (see also Baumol et al., 2007). These were the binding constraints on growth, which had become the main objective of policy, replacing the concern with structural transformation and inequalities.

Some like Rosenstein-Rodan (1943) advocated a 'big push' on a number of fronts to overcome coordination failures in structural development. Others, like Hirschman (1958) advocated a more selective approach focusing on sectors with maximum linkages to the rest of the economy. In addition to government steering of the structure of the economy, this stage also witnesses the rise of the views that global inequalities exacerbates the plight of the poor nations, and that they are locked into the world economy at disadvantageous terms being subject to continually declining terms of trade (Prebisch, 1959; Singer, 1964). Given such an external environment, and given the imperatives of industrialization and urbanization, import protection measures were widely adopted.

While not very often explicit at the times, the views about entrepreneurship and in the implications for the contribution of entrepreneurs is made in the last column of Appendix Table 1. This shows that during the first stage after the Second World War, entrepreneurship was not seen as a binding constraint (the only exception being Leibenstein, 1968 who did not really work within the field of development economics). Rather it is the lack of coordination and market failures, which keep countries underdeveloped and prevent structural economic change.

While in most instances very few of the contributors focused explicitly on entrepreneurship, the notable exceptions are Harvey Leibenstein and Nathan Leff. Their positions on entrepreneurship contrasted. Leibenstein took the view that the supply of entrepreneurship may be inadequate given structural market imperfections in developing countries. However, it was Leff's view who more accurately reflected the stance of development economics during this period towards entrepreneurship. In his words, 'entrepreneurship is no longer a problem' or a 'relevant constraint on the pace of development' in developing countries Leff (1979: 51).

Leff (1979) qualified this opinion by pointing out that if indeed entrepreneurship had ever been lacking in developing countries in the past, it had during the intervening years been so successful that this very success had created problems which are now constraining development (this might sound familiar to readers in 2009 when global growth is being constrained by the very 'success' of entrepreneurs in financial markets). Amongst the problems which Leff (ibid.) noted were the rise of 'oligopoly capitalism' and growing inequalities in incomes and wealth. Thus successful entrepreneurship in developing countries 'has led to serious economic distortions… [developing countries] have taken factor-market imperfections and transmuted them into product market imperfections' (ibid.: 55).

The implication from Leff's (1979) argument is that whereas entrepreneurship is not a binding constraint on development, the way in which it may interact with institutional features may constrain development, with latter posing the real constraints.

By the early 1980s the pendulum in development thinking started to swing in the opposite direction. The period between 1980s and 2000 has been described as the period of the 'Washington Consensus'. Some key contributors during this era are listed in Appendix Table 2. From the summary of their ideas, it can be seen that the core theme of this period has been a concern with the role of the state. In particular, the view that the role of the state may be harmful ('dirigisme' as Deepak Lal, 2006 calls it) gained

ground (although as the contributions of for e.g. Stiglitz and Olson suggest, this was far from universal).

This view and its policy advice (applied by the Washington DC-based Bretton Woods institutions) for rolling back the state and liberalization of markets was a reaction to the perceived failure of state-led structural transformation, the perceived success of East Asia through market-oriented policies,[7] the debt crisis (which delivered many countries to the IMF and World Bank) and the collapse of the Soviet Union.

During the Washington Consensus phase, the concern was also more on economic growth, and less with structural changes. To an extent this was influenced by the need which many developing countries had for stabilization and growth, following the debt crisis and the recessions of the 1970s and early 1980s.

As far as entrepreneurship was concerned, this was probably the period in the evolution of development economics when there seems to have been the greatest trust in markets and in entrepreneurs. However, as earlier, the implicit view was not that entrepreneurship is a binding constraint, rather, the state was seen as creating obstacles in the way of entrepreneurship. These included opportunities for rent-seeking and corruption (Bhagwati, 1982), government interference in markets (such as tariffs and state-run enterprises) (Lal, 1983) and weak governance (Olson, 1996).

There is still today, even after a reaction had set in against the Washington Consensus proper, a strong tradition in entrepreneurship and management which subscribes to this notion. Elsewhere (Naudé, 2009a) I described this tradition with the phrase 'Out with the Sleaze, In with the Ease', meaning rolling back the state and limiting opportunities for corruption, rent-seeking, and state capture (the 'sleaze'), and reducing the perceived obstacles in the start-up and running of business firms so as to make it easier to 'do business' (the 'ease'). Altenburg and von Drachenfels (2006) describe this as the 'new minimalist approach' to private sector development.

The Washington Consensus' emphasis on property rights reflect the views that states are predatory, and that good governance and good 'institutions' mean that the power of the state need to be curtailed. Institutions are therefore, in the words of Deepak Lal (2008: xi), a key proponent of liberalization and markets, 'the means to constrain the self-seeking instincts that we are endowed with as part of our basic human nature.' Property rights, contract enforcement, the rule of law and personal freedoms are widely seen as 'good' institutions. Institutions can also refer to societal beliefs and attitudes, what Deepak Lal terms material and cosmological beliefs.

Taking a historical view, he believes that the countries of Western Europe outstripped other world regions in terms of development from the Middle Ages onwards as a result of changes mainly in material beliefs towards entrepreneurs. As argued by Lal (2008: xii)

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7 But as Nayyar (2008: 262) said, Asia's success was inaccurately interpreted as being due to free markets/liberalization and little government intervention whereas in fact it was due to the opposite.

> ‘The material beliefs of all the agrarian Eurasian civilizations were inimical to the risk-taking and novel-seeking merchants and entrepreneurs...they were subject to constant predation by the state. It was due to the eleventh-century papal legal and administrative revolution of Pope Gregory VII that western Europe alone...broke from these dysfunctional material beliefs. The legal papal revolution created a church-state that protected property rights... This led to the Great Divergence, with the slow rise of the West from the twelfth century onward until it overtook the other hitherto richer Eurasian civilizations by the eighteenth century’.

The essence of Deepak Lal’s argument is that entrepreneurship is not the binding constraint on development; rather it is material beliefs towards entrepreneurial risk-taking and novelty seeking, and the underpinning thereof of a lack of ‘property rights’, which is the binding constraint on development. Loosening this constraint and according entrepreneurs more freedom is not only interpreted as having a defining impact on the rise of the West—indeed Lal sees this as the start of ‘capitalism’.

The third phase of thinking in development economics is seen by many to have been heralded by Joseph Stiglitz when, in his UNU-WIDER Annual Lecture in 1998, he called for a move towards the ‘post-Washington’ Consensus (Stiglitz, 1998), see Appendix Table 3. The year 1998 was of course the year of the Asian Crisis, by which many of the Asian countries were worst affected and had more difficulties adjusting. It was those countries who had been more slavishly following the ‘Washington Consensus’.[8] But even before the Asian Crisis, it was clear that the Washington Consensus had failed to deliver. As put eloquently by Nayyar (2008: 271):

> ‘The second period from 1981 to 2005, the era of markets and globalization, witnessed economic liberalization and economic reforms across the board in developing countries…More openness and less intervention was the bottom-line… There was also a profound change in the structure of incentives and institutions that reduced the role of the state to rely more on the market… There is now a growing recognition that the response to these reforms has been less than spectacular… Consider first the countries that were conformist…these liberalizers have under-performed or not performed. Some can even be described as dismal failures... Consider next the countries that were non-conformist… These countries are now recognized as start performers in terms of economic growth’.

If anything, these experiences have made many in development economics further convinced that entrepreneurship is not the binding constraint on development. Moreover, now the realization sunk in that entrepreneurship may not even be a positive

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8 As noted by Szirmai (2005: 574) ‘After the Asian crisis a renewed debate broke out on the advantages and disadvantages of liberalisation and globalisation’. A substantial part of debate focuses on inadequacies in the global financial architecture. Soon after the Asian crisis, a debate also started in the development economics literature on the merits and demerits of aid (official development assistance), with a similar focus on the inadequacies in international aid architecture (see e.g. Easterly, 2001; 2006; Sachs, 2005). The global economic crisis which erupted in 2008 has intensified both these debates (Naudé, 2009b).

vehicle for growth in development given the outcomes during this period, which also included increases in global inequality. The proportion of the world's population residing under the US$ 2-per day poverty stubbornly remained similar over this period.

At the same time that the Washington Consensus dominated development thinking, and was implemented and/or promoted by the Washington-based institutions across the developing world, we saw a similar movement towards free markets, deregulation and economic liberalization throughout many advanced economies, most notably the USA. As Atkinson (2009) showed, by around 1976 the inequality in distribution of wealth in the USA was the lowest since the Second World War; however, since then this inequality has risen to its highest level ever. The number of rich and super-rich in the USA were by 2000 at unprecedented numbers. By the time of writing in 2009, this wave of deregulation and liberalization had resulted in two asset bubble crises in the USA, the 2000 dot-com crisis and the 2007/08 subprime mortgage crisis (Naudé, 2009b).

There is not yet a 'consensus' where development economics should go beyond the Washington Consensus (Nayyar, 2008). A number of current approaches find flavor seems to suggest that the pendulum is swinging back, at least partially, to reconsider the agenda of the first stage of development economics as unfinished. It is also broadening the scope to consider the role of geographical factors in economic development (for instance the 2009 World Development Report of the World Bank is devoted to Economic Geography) which often implies a role for government in the provision of transport infrastructure (see e.g. Naudé, 2009c) and in urbanization (Kanbur and Venables, 2005). Thus, the recognition is that the role of the state in development is important (Stiglitz, 1998) and that development is about more than just economic growth (Sen, 2000). As described by Stiglitz (1998: 24–25) in his 1998 UNU-WIDER Annual Lecture:

> 'The Washington Consensus policies were based on a rejection of the state's activist role and the promotion of a minimalist, non-interventionist state. The unspoken premise is that governments are worse than markets. Therefore the smaller the state the better the state…[however] The state has an important role to play in appropriate regulation, social protection, and welfare. The choice should not be whether the state should be involved, but how it should be involved. Thus the central question should not be the size of the government, but the activities and methods of government'.

It should be mentioned here that since the mid 1980s two methodological approached took root in the development economics field, one strongly microeconomic and the other more macroeconomically focused (see Rodrik, 2008). Both started to recognize the importance of 'institutions' in understanding diverse outcomes in diverse context. At first, the focus was, in line with the Washington Consensus, on property rights and good governance as 'institutions' (see e.g Acemoglu, 2003). However, more recently the concern has widened, with the recognition that a one-size fit all approach may be inappropriate. Harvard development economist Dani Rodrik's 2007 book's title reflects this view as 'One Economics, Many Recipes' (see Rodrik, 2007). This approach, whilst still recent, is unlikely to give entrepreneurship centre stage, although the recognition that there can be different binding constraints in different countries at different period may be giving a potentially more important, and previously unappreciated role to entrepreneurship. Thus Hausmann and Rodrik (2003) argue that the entrepreneur is

important for a country to 'discover' what it is good at producing (even failing entrepreneurs have a value in signaling what activities may be profitable) and Iyigun and Rodrik (2004) argues that institutional and policy reforms could have negative impacts on growth if pre-existing entrepreneurial activity is strong, and *vice versa*.

However, it does imply, through the need for 'many recipes' that there may indeed be cases where entrepreneurship is a constraint. But to understand whether and how this may be the case, we need to understand the relationship between entrepreneurship and institutions. And one prerequisite for this that we need to be able to better measure entrepreneurship. In the next section I show that entrepreneurship is not currently measured sufficiently for research to make much headway in this regard. I also show that the entrepreneurship field has failed to convincingly demonstrate that entrepreneurship is a binding constraint on growth in developing countries.

4 Inconsistencies and Inadequate Evidence in the Entrepreneurship Literature: Is the Developmental Role of Entrepreneurship a Matter for Belief?

Although the entrepreneurship, small business, and management literatures widely subscribe to the idea that entrepreneurship is important for economic growth and development, closer scrutiny of the field leads me to conclude that their case for entrepreneurship being an indispensable driver for economic development at least in developing countries is weak.

For one, most of the concerns in this literature is not about development as such, but about economic growth. As pointed out earlier, there are important differences between them. Generally, the entrepreneurship literature has neglected economic transformation, structural change, and inequality, the 'qualitative' requirements that need to accompany growth for it to be development consistent.

Second, despite the claims for the prowess of entrepreneurship for economic growth, there is somewhat of an inconsistency in the literature. A finer reading shows that conceptual models and empirical studies in entrepreneurship actually suggest that entrepreneurship is only contributing to economic growth in already advanced economies. For poor, developing countries, the implication is very similar to that found in the development economic literature: entrepreneurship does not matter.

Consider for instance that the major conceptual approach towards defending the role of the entrepreneur in economic growth has been to see the entrepreneur as a conduit for innovation. This has its origins in Schumpeter's description of the essential contribution of the entrepreneur as someone who causes continual disequilibrium in economy through 'creative destruction', i.e. radical innovation which leads to more efficient allocation of production factors and thus productivity improvements. This 'radical innovation' is widely seen in the literature as being more important than 'replicative' innovation for economic growth, although it is 'replicative' entrepreneurship that dominates in developing countries (see e.g. Baumol et al., 2007).

That the entrepreneur's essential contribution to economic growth is through innovation is confirmed in the most recent entrepreneurship literature. This literature is essentially an attempt to incorporate Schumpeter's insights into the literature on endogenous

economic growth. In this literature, which has extended the earlier work of Solow (1956) wherein a large part of the variation in cross-country growth rates could not be explained by traditional production factors such as capital and labour alone, and wherein technological change was essentially exogenous. By endogenizing technological change entrepreneurs are here seen as 'knowledge filter' that commercializes innovations. In the words of Audretsch et al. (2006: 5) 'entrepreneurship makes an important contribution to economic growth by providing a conduit for the spillover of knowledge that might otherwise have remained uncommercialized'.

In most developing countries, where production takes place well within the technological frontier, the view is that economic growth is not 'innovation driven' and that replicative entrepreneurs abound. Such entrepreneurs are however apparently not terribly important for economic growth. As put by Baumol et al. (2007: 3)

> 'To be sure, replicative entrepreneurship is important in most economies because it represents a route out of poverty, a means by which people with little capital, education, or experience can earn a living. But if economic growth is the object of interest, then it is the innovative entrepreneur who matters'.

This very much resonates with Banerjee and Duflo's (2007) call not to 'romanticize the penniless entrepreneurs'.

Because radical innovations are not essential in poor economies to move the production and technological frontier outwards as in developed economies, the implication is, as in development economics, that entrepreneurship is not the binding constraint on economic growth and development. Indeed, small businesses owners, which 'dominate the economic life of most developing nations' (Gollin, 2008: 219) are in this literature not even considered entrepreneurs (Wennekers and Thurik, 1999).

A recent edited volume in the Edward Elgar entrepreneurship series focusing on entrepreneurship in emerging regions (Phan et al. 2008) comes to a broadly similar conclusion, namely that in poor economies entrepreneurs are not the binding constraint. They are not the ones who are essential for 'kick-starting' growth. As Phan et al. (2008: 325) concludes:

> '…studies of entrepreneurial regions across the world…have underscored the critical role of governments at different levels in the emergence of these regions...the magnitude of government influence, which is significant in the early stages of development, seems to decline in later stages relative to other factors… The explanations for this vary from the traditional factor substitution wherein government kick-starts the development of a sector, which then becomes attractive for private capital to accumulate, to the post-modern institutionalization, in which the development of such institutions as intellectual property regimes engender capital accumulation'.

Thus, they find that in early stages of development, governments need to address more binding constraints on development such as market failures and institutional weaknesses. Their recognition of the importance of government in addressing market failures, kick-starting growth, and in the importance of institutional foundations or

prerequisites for growth, is entirely consistent with both the early development economics literature, for instance Hirschman (1958) on linkages, Rosenstein-Rodan (1943) on the need for a 'big push', and also consistent with the more recent development economics literature on the need for good institutions (e.g. Rodrik, 2000; 2008).

This is as far as the conceptualization of entrepreneurship and economic growth and development is concerned. As far as the empirical evidence for the notion that entrepreneurship is good for economic growth and development is concerned, there may be even less of a leg to stand on. This is because even in the case of advanced economies, the empirical evidence remains at least in my interpretation, unconvincing. The jury is still out, and whether entrepreneurship is good for economic growth in developing countries may be a matter of belief.

For instance, Nyström (2008) provides a summary of empirical tests of the relationship between entrepreneurship and economic growth. With the exception of three studies, the studies cited by Nyström (2008) are exclusively focusing on advanced economies. She lists 38 studies between 1996 and 2006 which quantify the relationship between entrepreneurship and economic performance. In these studies entrepreneurship is measured either by self-employment rates (most often), business ownership rates, early-stage entrepreneurial activity (start-up activity), or even by the number of patents registered (to reflect the idea that it is 'innovative' entrepreneurship that really matters). Economic performance is measured using either employment, GDP growth, or productivity growth.

The results of these 38 studies are in my view still unconvincing for four reasons.

One is that they are a mixed bag of results. Results do not seem to be very robust. Definitions, times periods, quality of data, estimation methods—all seem to matter for the results. Entrepreneurship seems to matter in different ways in different context, suggesting that we do not understand the mechanism through which it operates. Some find outright that entrepreneurship does not matter for growth—for example Wong et al. (2005) using empirical evidence from 37 countries participating in the 2002 Global Entrepreneurship Monitor finds significant evidence for 'the existence of entrepreneurial activities that do not contribute to economic growth'. And Parker (2006: 453) reports that there is no unambiguous empirical relationship between the rate of self-employment (often taken as a measure of entrepreneurship) and unemployment rates.

A second reason is that these (macro level) studies are generally marred by weak methodologies. Many authors restrict their estimators to OLS in conjunction with using cross-section data. In such cases OLS estimators are often biased due to non-constant variances of the error terms; also, cross-section methods cannot control for unobserved heterogeneity amongst countries and are therefore subjected further to omitted variable bias. In addition they bias their estimates by including GDP per capita as control variable on the right hand side of their estimating equations together with their independent variables (such as institutional determinants of economic growth), thus not accounting for the high level of correlation between these variables.

A third and related reason is that the evidence from mainly on macro level, cross-sectional studies should not be considered 'hard' evidence. At least in this regard entrepreneurship scholars could learn from development economics, where a rich microeconomic tradition has arisen in recent years wherein theories and policy prescriptions are subjected as much as possible to randomized field trials. As put by Banerjee (2007: 115–116; quoted in Rodrik, 2008: 3–4)

> 'The beauty of randomized evaluations is that the results are what they are: we compare the outcome in the treatment with the outcome in the control group, see whether they are different, and if so by how much?'

Whereas development economics have moved in the last decade or so away from the Washington Consensus towards an approach where there is less concern with cross-country comparisons and identification of grand development narratives based on macroeconomic indicators, and towards an approach identifying the institutions that are appropriate in each different context and understanding and measuring the microeconomic relationships better, it would seem that entrepreneurship researchers are moving in the opposite direction to engage more in cross-country comparative work and macroeconomic relationships.

A fourth reason is that empirical studies on the impact of some measure of 'entrepreneurship' on some measure of 'economic performance' often leaves the impression of 'data mining'. In fact it would seem that the very empirical definition of what entrepreneurship is, seems to be changing depending on empirical results. Disingenuously, scholars have been deeming an indicator as reflecting entrepreneurship only when it appears to be significantly and positively related to economic growth. Thus, when self-employment appeared to be insignificant in cross-country regressions, it was fairly quickly dismissed as not being a good measure of entrepreneurship. Then, when total entrepreneurial activity (TEA) of the GEM ran into the same, it again was quickly dismissed, and a distinction made between necessity entrepreneurship (which is not really seen as true entrepreneurship) and opportunity entrepreneurship. With measures of opportunity entrepreneurship now also not standing up to empirical scrutiny, some move to advocate the ratio between necessity and opportunity entrepreneurship as being the relevant measure of entrepreneurship.[9] Others, when finding measures of innovation to be significantly correlated with development, quickly rush to claim these to be true indicators of entrepreneurship.

Most of the studies included in the discussion above have focused on advanced economies. In the words of Bruton et al. (2008: 1) 'entrepreneurship research can still be critiqued as almost exclusively focused on North American and European sites'.[10]

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9 Because of the fundamental belief amongst entrepreneurship scholars that entrepreneurship is really indispensable for economic growth, and that consequently more advanced countries should be characterized by more and better entrepreneurship, the scholarly community was shocked that the GEM's TEA found higher rates of entrepreneurship in developing countries.

10 In an overview of the top entrepreneurship journals over the period 1990 to 2006, Bruton et al. (2008: 3) finds that 'less than one-half of 1 per cent of the articles in this period addressed entrepreneurship in emerging economies despite its critical role in the future of the world economy…the topic remains woefully underexamined'.

They are therefore of limited use in answering the question whether entrepreneurship matters for economic growth and development in emerging and developing countries. To be precise, as far as these countries are concerned, there is really such a lack of empirical studies that perhaps nothing can as yet be said. Autio (2008: 2) has consequently remarked that 'we actually know very little about whether and how entrepreneurship either contributes or does not contribute to economic growth in developing countries'.

It may indeed not be a binding constraint.

5 Entrepreneurship: Unpacking the Institutional Black Box?

In the previous sections I had come to the conclusion that in spite of appearance of differences on the surface between the views of the development economics literature and the entrepreneurship literature, on a deeper level they may be both suggesting that entrepreneurship is not a binding constraint in poor countries. Institutions matter more for long run development going and, at least in the entrepreneurship literature, create the environment from where entrepreneurs can emerge to eventually drive economic growth and change the structure of economies. And as I had shown in Section 3, development economics has come full circle to again focus not only on economic growth, but on structural economic transformation as a prerequisite for economic development.

As development economists and entrepreneurship scholars are converging on the importance of institutions, it is however unfortunately a fact that we do not know as much about institutions and how they affect the 'transformation curve', as we should. 'Institutions' as explanation for development and entrepreneurship is still largely a 'black box'. This black box nature is a measure of our ignorance about the detailed mechanisms of development. A number of factors complicates the understanding of the role of institutions.

For one, institutions are endogenous (Acemoglu 2003) and relatively little is known about the co-evolution of institutions, entrepreneurial behaviour, and a country's stages of development (Fogel et al., 2006: 572). More advanced economies may be better able to 'afford' good institutions and more entrepreneurs. And entrepreneurs may shape institutions.

Second, 'obvious' policy reforms to create good institutions such as mentioned above in the context of the Washington Consensus (e.g. property rights, rule of law, etc.) may only be a necessary, but not sufficient condition for development. Iyigun and Rodrik (2004) and Nayyar (2008) note that many countries where much progress have been made in adopting these during the 1990s experienced low and disappointing growth, whereas countries with less enthusiasm for the received wisdom (e.g., China and Vietnam) achieved higher growth rates. An furthermore, despite that fact that the USA is often held forth as a champion of unfettered markets and individual entrepreneurship, a closer reading of its development success shows that it has been a strong developmental state. As Lazonick (2009) points out 'There is no shortage of entrepreneurial individualism in American-style capitalism, but its transformation into higher standards of living has depended critically on investments, protections and subsidies provided by the developmental state.'

Third, institutional reform itself is an ongoing, dynamic process (Estrin et al. 2006). It creates uncertainties which may have perverse consequences for the relationship between development and entrepreneurship, such as the entrenchment of former elites and a rise in rent-seeking behaviour. We do not know how to design good institutions that are relevant for a particular context. Often, paradoxically, 'bad' institutions have good outcomes and vice versa (Chang, 2007).

Fourth, initial conditions may matter for the dynamics and success of institutional strengthening. These include the distribution of income and wealth before the commencement of institutional reforms and institutional building. Highly unequal societies may have a much 'flatter' transformation curve, i.e. would need many more additional entrepreneurs to have the same impact on growth than more equal countries. But this is speculative and needs much more research.

Finally, we need to ask how understanding entrepreneurship better can lead to improved understanding of the relationship between institutions and, entrepreneurship and structural change. In this regard, UNU-WIDER started a project on entrepreneurship and economic development to ask, amongst others, how the institutional black box can be unpacked. In one of the contributions to this project, Gries and Naudé (2010) provide an endogenous growth model with microeconomic foundations to illustrate that entrepreneurs provide five essential roles in structural transformation. (1) they create new firms outside of the household, (2) they absorbe surplus labour from the traditional sector, (3) they provide innovative intermediate inputs to final goods producing firms, (4) they permit greater specialization in manufacturing, and (5), they raise productivity and employment in both the modern and traditional sectors.

In each of these, the institutional setting may create binding constraints. In particular they use modelling tools from labour economics (specifically labour matching models) to match entrepreneurial opportunities in the modern sector, with entrepreneurial abilities. Herein, the idea that markets play an important role in facilitating the appropriate matching (application) of entrepreneurial ability, is important. The implication is that markets may fail to match entrepreneurial talent with opportunities, which will have knock-on effects for all of the roles of the entrepreneur in structural transformation. Thus, failure in an economy to match entrepreneurial talent with opportunities will flatten the transformation curve, making efforts even to increase the supply of entrepreneurship, without impact. Their model, and further extensions and elaborations to their model, similarly offers to scope to study other market and state failures as binding constraints in structural transformation.

Finally, while entrepreneurs and institutions may influence structural transformation, the very process of structural transformation may change the nature and concept of entrepreneurship so that entrepreneurship may be itself endogenous in the development process. Ciccone and Matsuyama (1996) realized this when they showed that if a particular economy produces a limited range of intermediate goods, the final goods sector will use 'primitive' production methods and will have little demand for sophisticated, new inputs. This will in turn lead to lower incentives for potential entrepreneurs to start-up new firms (1996: 34). The economy can get stuck in such an underdevelopment trap with primitive production in its (small) modern sector. As in other underdevelopment traps discussed in the early development economics literature, this suggests the case for state intervention and institutions to enable new start-ups to

produce new intermediate goods. This in turn will induce final good producers to demand more of these, which will again in turn improve the incentives for other entrepreneurs to enter the market for more sophisticated intermediate inputs.

6 Concluding remarks

Joseph Schumpeter was much concerned about economic development and structural changes, his 1912 book being entitled The Theory of Economic Development (translated in 1934). But he had little direct influence on development economics as subject as it developed after the Second World War. He did however, have a huge influence on the field of entrepreneurship, but perhaps ironically, more in terms of stimulating research on how and why entrepreneurs innovate, than on their impact on economic development. The latter remains a challenge to both fields.

In this paper it was argued that the essence of the challenge is to study entrepreneurship as an attempt at unpacking the 'black box' of institutions, given that both fields are now converging on the centrality of institutions in explaining both outcomes in terms of entrepreneurship and economic development. Entrepreneurship is not likely to be a binding constraint on economic development and structural change in the poorest countries, but it may improve our understanding of the truly binding constraints.

By understanding better the role of entrepreneurship as a conduit through which binding institutional constraints are transmitted to economic outcomes may assist in the design of context-specific institutions. It may illuminate the impact of institutions on the nature and concept of entrepreneurship, and particularly on the role of entrepreneurship in innovation in developing countries. It may also assist in understanding how institutional change and institutional design can come about, because entrepreneurs are not passive actors under externally imposed institutional frameworks, but work actively to change these institutional frameworks—and this impact may be even more important in developing countries. This circular, potentially unstable and unpredictable interaction between institutions and entrepreneurship is dynamically rich in a manner which Joseph Schumpeter would have appreciated. The time has come for a closer integration of entrepreneurship and development economics.

Appendix

Appendix Table 1: Development Economists and Entrepreneurship: Views During the Development Consensus Phase, 1940s–1980

Key Contributor (in chronological order)	Concerns in development	Views on (and implications for) entrepreneurship
Paul Rosenstein-Rodan (1943)	Structural change: Industrialization is necessary for growth (economies of scale, labour specialization, etc). But a 'big push' is needed to overcome a low level equilibrium trap.	No explicit views. But implies that planned investment on a large scale is needed because markets and uncoordinated entrepreneurs cannot provide it. Later this idea was taken up by others to argue for government support in encouraging entrepreneurial cluster formation and to show how spillovers matter for entrepreneurial performance.
W. Arthur Lewis (1954)	Structural change: It is importance for countries to transform from rural/agriculture-based economies to modern, industrial-based economies. Market failures: These result in savings in developing countries being inadequate to finance investment.	The 'capitalist' is essential in the transformation by investing in the modern sector in capital which augments labour, and in saving the surplus from modern production. It is not, however, the supply of capitalists (and by implication of entrepreneurship) which constrains the process of transformation, but of surplus labour. Once surplus labour has been transferred, structural change is completed and wages (equaling the marginal product of labour) equalized across labour markets.
Hollis B. Chenery (1955; 1975)	Structural change: Industrialization is a prerogative for development. Lagging countries could leapfrog development. Market failures: The consequences of economic growth are not equally distributed. Poverty traps may exist	No explicit views. But later, others will argue that in leapfrogging development, entrepreneurs in lagging countries may play a potentially important role by imitating and copying technology from advanced countries.

Gunnar Myrdal (1957)	Structural change: Urban-based industrialization is important for development. However, agglomeration and cumulative causation creates path dependencies in development. Market failures: These are ubiquitous in developing countries. He argues the need for a state intervention, but sees corruption and rent-seeking (the 'soft state') as a significant obstacle to development. International inequality: Recognizes the need to overcome international dependency.	His early works focused on constraints on African-American entrepreneurship. He did not consider entrepreneurship as an appropriate vehicle for social mobility.
Albert Hirschman (1958)	Structural change: Can be promoted through 'unbalanced' growth, meaning promoting a targeted, leading sector. Market failures: Coordination failures are widespread in underdevelopment; State targeting of sectors with forward and backward linkages are therefore needed. International dimension: To participate in global economy countries need to find local-based solutions to underdevelopment. Binding constraints differ amongst countries.	The state needs to support certain type of entrepreneurial activities—not all—by creating incentives ('inducement mechanisms') for 'capital and entrepreneurship'. Coordination failures make returns to individual entrepreneurs low, i.e. they reduce opportunities for private investment. Capital is not lacking, but willingness to take risk is.
Raul Prebisch (1959)	Structural change: Industrialization important, but hindered by deteriorating terms of trade of developing countries. Market failure: This creates the need for the state to push structural change and interfere in trade to improve a country's terms of trade. Advocates protectionism. International dimension: The existing centre-periphery relations which characterizes the global economy is to the disadvantage of developing countries and the international division of labour.	No explicit views.

Alexander Gerschenkron (1962)	Structural change: As 'late' industrializers the challenge for developing countries is to catch up. They can leapfrog and skip stages in the development process by importing technology. He is thus critical of those, like Rostow (1960) who sees development as needing to go through specific fixed stages. Market failure: The state is needed to overcome these in financial and investment; emphasized importance of institutions, particularly financial institutions.	Is seen as having advocated 'surrogate' entrepreneurship by the state, in order to force industrialization. Later, financial constraints will be identified by many as seriously inhibiting the start-up rate and growth of entrepreneurial firms.
Hans Singer (1964)	Structural change: Developing countries should diversify out of primary production. Economic growth: Science, technology, innovation, and human capital are important. But no blueprints for development exists as each country's circumstances are unique.	Influenced by Schumpeter in terms of his advocacy of the importance of innovation in driving growth and making diversification possible.
Nicholas Kaldor (1966)	Structural change: Development goes through three different stages, the underdevelopment stage, the intermediate stage, and the mature stage. Industrialization is necessary for development. International dimension: Exporting is necessary if poorer countries are to industrialize, as they need larger markets in order to specialize and generate increase returns to scale in production. But, barriers in international trade are a hindrance.	Entrepreneurship is not a binding constraint. Rather it is lacking of being able to achieve economies of scale and specialization which is hindering industrialization in developing countries.

Michael Lipton (1968)	Structural change: Warns against the neglect of agriculture in promoting industrial development. Market failure: Point to inequalities in land distribution and riskiness of agriculture as failures which inhibits agricultural productivity.	Suggest that farmers in developing countries act as entrepreneurs who do *not* maximize profit. Identify rural entrepreneurship as limited by lack of access to land (wealth). Although production is small scale (small firm size), it is often an important (efficient) response to conditions.
Harvey Leibenstein (1968)	Not a 'development economist' as such, he introduced the concept of 'x-efficiency'. However, he was one of the few economist of the era who deemed entrepreneurship as being important for economic development. Market failure: Market 'imperfections' are extensive and create a need for entrepreneurship.	Entrepreneurs are needed to fulfill a 'gap-filling' role in imperfect markets. The supply may be constrained by lack of capabilities, opportunity costs, etc. Distinguish between routine entrepreneurship (e.g. management) and Schumpeterian entrepreneurship.
Ester Boserup (1970)	Structural change: Rural-urban migration and the linkages between agriculture and industry important in the development process. Economic growth: Emphasized the importance of population growth, densities, and agglomeration, and of these as necessary for technological innovation. Institutional context: Gender inequalities widespread, role of informality in developing countries.	Highlighted the intense activity of women as entrepreneurs in rural settings in developing countries.

Charles P. Kindleberger (1958; 1978)	Structural change: 'Commercialization' is needed for industrialization. Market failure: Warns against unregulated financial markets and financial crises.	Recognize role of entrepreneur in industrialization and conditions to empower entrepreneurs. But recognize possible dangers of entrepreneurial behavior (e.g. in financial markets)
Nathan Leff (1979)	Market failure: Without regulation and state intervention, entrepreneurship can be too 'effective', undermining economic growth through market concentration and inequality.	Explicitly considers the role of the entrepreneur. Concludes that entrepreneurship is not a binding constraint, but that imperfections in product markets are.

Appendix Table 2: Development Economists and Entrepreneurship: Views During the Washington Consensus phase, 1981–2000

Key Contributor (in chronological order)	Key concerns in development	Views on / Implications for entrepreneurship
Robert Chambers (1981)	Conceptual: Defined 'sustainable livelihoods', which should be the target of development policy; focus on understanding poverty in its many dimensions. Government failure: Critical of top-down national planning; emphasize need for participatory planning; local solutions, local knowledge needed.	Entrepreneurial behaviour important for rural development and smallscale farming, as vehicle out of poverty. Governments do not often understand the requirements of smallscale informal entrepreneurs.
Jagdish Bhagwati (1982)	Economic growth: Developing countries need to open up to trade and export promotion. Government failures: Government interference/dirigisme creates incentives for rent-seeking (directly unproductive activities).	Not directly concerned with entrepreneurs, but his analysis of rent-seeking predates ideas in entrepreneurship about institutional incentives which leads to skewed allocation of entrepreneurial talent towards unproductive activities.
Deepak Lal (1983)	Economic growth: Classical liberalism (the invisible hand) is necessary for growth. Openness, deregulation, and liberalization of markets are needed. Government failures: Predator states reduce the contribution which entrepreneurs can make. The state needs to be rolled back for private sector development to take place.	Entrepreneurship is ubiquitous across time and countries. Entrepreneurs take risks and introduce novelty, but state predation limits their contribution. Institutions, such as property rights and societal attitudes accepting of entrepreneurs are necessary for extensive growth.
Joseph Stiglitz (1986)	Market failure: Imperfections in information (asymmetric) leads to market failures. This implies a role for government	Not directly concerned with entrepreneurs, but his work has implications for instance in understanding the nature of financial constraints on start-ups.

Robert Barro (1996)	Economic growth: Concerned with the cross-country empirical evidence on the determinants of growth and convergence between rich and poor countries. Emphasizes property rights and free markets as key 'institutions' for economic development.	Not directly concerned with entrepreneurs, but his emphasis on property rights and other legal bases for growth implies that entrepreneurs (firms) will function better under certain institutional conditions.
Mancur Olson (1996)	Economic growth: Growth depends on institutional context. Emphasizes the importance of contract rights and collective action. Market and government failures: Both of these keep countries underdeveloped—it is not the size of government that matters, but the structure of incentives it creates and whether it can address or worsen market failures.	Firms (i.e. entrepreneurs) in developing countries act rationally, even under difficult conditions. However, this does not necessarily generate 'socially efficient outcomes'. Cultural differences (including differences in entrepreneurial culture) cannot explain large cross-country differences in incomes.

Appendix Table 3: Development Economists and Entrepreneurship: Views during the Post Washington Period, 2000–present

Key Contributor (in chronological order)	Key concerns in development	Views on / Implications for entrepreneurship
Joseph Stiglitz (1998; 2002)	Market failures: The role of the state is necessary as there are market failures, especially in financial markets. Competition and regulation of private sector activity is needed to avoid 'market fundamentalism'. The state need to be focused and effective. International: Globalization in its current form is harmful to development. The international development institutions (IMF, World Bank) need to be redesigned.	Financial markets are important for entrepreneurship. A growing number of studies on the relationship between entrepreneurship and finance refer to Stiglitz' work, and tend to suggest an important supervisory and regulatory role for government.
Amartya Sen (2000)	Conceptual: What is development? How can it be measured? Human development index, hunger and food security, gender inequalities, freedom as development. Return to poverty orientation in development focus.	People are not 'rational fools'. Development is more than just growth and people are motivated by more than just profit-seeking. Freedom is a good in itself, not just a means to an end.
Daron Acemoglu (2003)	Economic Growth: Productivity and growth differences between countries are due to the riskiness of investment, investments in human capital, and technology. These in turn depend on the quality of institutions. Government failure: Predatory governments have a negative impact on growth. Proper institutions are needed to safeguard property rights. But this does not necessarily mean small government; rather strong, democratically accountable governments are best for development.	Institutions create incentives which influence the allocation of talent. Many productive activities in poor countries are often subject to undiversifiable risk.
Jeffrey Sachs (2003; 2005)	Economic Growth: Developing countries are stuck in a poverty trap. A 'big push' is needed to overcome many of the factors causing this trap. Increasing international aid to developing countries can play an important role in achieving this. It is not only institutions that are important:	Entrepreneurship is an important vehicle out of poverty; International aid projects should encourage rural entrepreneurship in the poorest countries.

	geographic factors are important in themselves in explaining global inequality and poverty. International: Critical of the role of IMF and World Bank in global development. Promote the Millennium Development Goals as targets for international development.	
Ha-Joon Chang (2007)	Structural change: Industrialization remains indispensable, but difficult to attain for developing countries are constrained in options (kicking away the ladder). Market failure: Intervention is needed to foster industrialization. International: Inappropriateness of 'global-standard' institutions for development.	Calls for 'state entrepreneurship'. This is a state that provides a vision and mobilizes resources for achieving that vision.
Paul Collier (2007)	Market failures: Trade and globalization important mechanisms to escape poverty, but government assistance needed. Government failures: Accountable and transparent government needed. State failure by lack hereof as elites enrich themselves. Conflict may necessitate outside interference. Democracy does not guarantee growth. International: Trade preferences needed for the poorest to jump-start their growth. Generally globalization is good for development.	Entrepreneurs need opportunities, but governments can destroy opportunities.
Dani Rodrik (2007)	Market failures: Institutions are important for growth and development. However, growth may start without appropriate institutions, but will require such institutions to be sustained. Structural change: Industrialization is central in development. This needs a 'strategic partnership' between state and private sector.	The state should, through industrial policy, entice entrepreneurs to 'discover' what an economy is good at producing. Institutional and policy reforms could have negative impacts on growth if pre-existing entrepreneurial activity is strong, and vice versa (see Iyigun and Rodrik, 2004).

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