



TRADE & INDUSTRIAL POLICY STRATEGIES

**CURRENT HETERODOX INDUSTRIAL POLICY
THINKING: A MUTING OF ASPIRATIONS
OR SOUND, PRAGMATIC SUGGESTIONS?**

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ABBREVIATIONS

AD	Asian Driver economies
CCS	Carbon Capture and Storage
FAO	Food and Agricultural Organization
FDI	Foreign Direct Investment
GHG	Greenhouse Gas
GNI	Gross National Income
GSI	Global Standard Institutions
IMF	International Monetary Fund
IPRs	Intellectual Property Rights
IP	Industrial Policy
IPAP	Industrial Policy Action Plan
MNCs	Multinational Corporations
NEG	New Economic Geography
NIPF	National Industrial Policy Framework
OECD	Organisation for Economic Co-operation and Development
R&D	Research and Development
WTO	World Trade Organization

INTRODUCTION

Whether it is the spirit of a new century and the reflection that such milestones evoke, the financial crisis of 2008, the failure of Latin American and African countries to replicate the South-East Asian Miracle, the rise of China, the threat of climate change, or simply natural progress, the heterodox industrial policy (IP) debate has undergone a momentous shift in the last decade. (Largely) gone is the achingly technical discussion of the motivations of industrial policy and the attendant debate of whether industrial policy is a good idea or not. In its place is a recognition that industrial policy is undertaken everywhere in the world even if it is not overtly called industrial policy. It is also now widely accepted that industrial policy is a response to market failure just as education policy or health policy are responses to the market's failure to provide the optimal quantity of a service in society. This "normalisation of industrial policy"¹ has allowed development economists to stop focusing on defending and justifying the pursuit of IP (especially in lagging economies). Instead they can now focus on extant, fine-grained, real world problems facing policymakers operating in difficult situations. Attitudinally they now have the space to view IP design and implementation problems as normal. Through this lens, problems (which will invariably arise) are viewed not as insurmountable, but merely the normal course of business which a sensible policy framework must address.

Ha Joon Chang eloquently captured this shift in thinking when he wrote, on developing countries, that the new challenge is not getting the content and application of IP right, but getting "the content and application of IP right *in circumstances* where the country is run by flawed leaders presiding over a politically weak and internally fragmented state"(Chang, 2009 p.19). This new challenge is not limited to IP scholars who are now faced with integrating political economy, social anthropology and comparative historical analysis into economic and industrial policy theory. The corollary of this new thinking is also associated with policy and instrument considerations that are markedly different to previous IP interventions and thinking. The implications of these new views will seriously test the comfort levels and perceptions of incumbent decision-makers and those in government responsible for industrial policy. For example, whereas lagging economy IP development processes have traditionally been based on a view that IP is a top-down policy implemented by a developmental state and that the role of the state is paramount – in the current heterodox view it is suggested by many authors that IP should rather be viewed as a strategic collaboration between the private sector and the public sector. Likewise, while traditionally developing countries have spent considerable time and effort in learning about and imitating world best-practice instruments and institutions, the new literature suggests that lagging economies might often be better served by implementing second-best institutions and options.

The purpose of this paper is singular – it seeks to make a useful contribution to incumbent IP decision-makers' thinking in their current operating environment. Usefulness may be established simply by providing an accessible review of current heterodox IP seminal thinking, which adds to the knowledge base and supports the percolating of new ideas and questions going forward. Usefulness may likewise be achieved by providing access to concrete ideas for practical, implementable interventions which may enable incumbents to channel what already exists in a manner that improves policy outcomes. Given that this paper forms just one contribution to a broader industrial policy support process and research agenda, the paper focuses on presenting current² heterodox IP

¹ Term first used by Dani Rodrik, 2007

² Current is generally defined as the last nine years, i.e. years since the adoption of the National Industrial Policy Framework (Department of Trade and Industry, 2007).

thinking in its essence and stripped away much of its underlying complexity and theoretical detail³. Case study examination has been minimised to ensure that the focus remains on the larger ideas and fundamental thinking presented rather than their application in a specific setting. Importantly, the paper does not cover a direct application of the theory to the local South African context. Such a step is viewed as being premature both in the available information and in the purpose of the paper.

Section One of this paper begins with a brief outline of key points of departure and shared understandings of the traditional heterodox view of industrial policy as in the South Korean exemplar, which dominated thinking before the most current era of heterodox thinking covered in this paper. It then briefly turns to the South African IP context.

Section Two reviews the new global order literature and begins by looking at two distinct camps of heterodox thinking in relation to industrial policy in the 21st century. The first camp has been labelled the “new global order” It comprises the work of authors who argue that the external operating environment within which IP is practised today is so markedly different to the operating environment of yesteryear that the content of IP and the tools it uses must change and adapt. The underlying message in this literature is that the South Korean blueprint and roadmap to industrialisation and growth cannot be replicated in the current era because of the extent of the change in the operating environment. Five key new global order issues are considered: climate change; the rise of India and China as centres of manufacturing; the food, fuel and financial crisis; shrinking policy space; and increased globalisation and specifically the rise of global production-sharing. Each is considered briefly.

The second camp of current heterodox thinking has been labelled the “statehood camp”. Authors in this camp share a view that the content of industrial policy is less important in the modern era than the capacity and capability of the state to design and implement such policies. This perspective (which is the focus of the report) can be further sub-divided into two distinct approaches towards understanding the state, its institutions and their operation as applied to industrial policy. The first view is the more conservative World Bank, International Monetary Fund (IMF), Organisation for Economic Co-operation and Development (OECD) view, which measures state fragility and then seeks to build “effective statehood” such that developing countries become more like developed countries institutionally. This view is based on a simplifying assumption that there exists a universally appropriate benchmark for good institutions and effective states. The alternative view in the statehood camp is that every state is unique and exists in its present form because of a complex range of economic, political, social, historic, geographic and anthropological factors. This view is covered in detail in Section Three.

Section Three unpacks the work of authors who concentrate on understanding how institutions and states achieve their current form. This historic, path-dependent view provides a basis of understanding to then shape appropriate industrial policies for a given point in time. This camp expands the field of traditional macroeconomic and microeconomic theory on industrialisation and growth to include theories which help understand state functioning and specifically: the ability of the state to set goals unilaterally, the characteristics requisite to implement policies in pursuit of such goals, institutional path dependency, and the compatibility of policy with an existing balance of power. Three concepts are considered in detail: the idea of state autonomy, the idea of embeddedness, and most importantly perhaps, the *compatibility* of a chosen industrial policy with existing state-embedded autonomy. The bottom line of the new heterodox IP thinking covered in

³ The idea is that any new approach or instrument which is identified as interesting in the South African context by incumbent policymakers can be followed up in the next round research.

Section Three is that for any one economy there will be several different recipes for achieving growth. The optimal recipe will depend on several elements of policy design and the balance of powers operating in a society at a given point of time. It follows that IP growth recipes will always be unique both in terms of place and time.

Section Four comprises examples of specific interventions or practices identified during the literature review in Section Three. The section includes the “comfort zone challenges” suggested for policymakers. The section stresses that it would be *premature* to consider these examples (and in some instances proposed generalised rules of thumb) as appropriate tools in the current South African context let alone as recommendations. Rather the ideas are presented simply as ideas and as the logical conclusion of a shift in thinking about how one understands and implements IP in the modern era. The new heterodox IP literature covered will be positioned with policymakers so that should this resonate with them, they will be better supported to assimilate this thinking and its implications because they have also been presented with possible real world actions. These concrete examples add to the usefulness of the paper.

Section Four is dominated by two underlying broad fields for improved IP performance: 1) relationships between the state and business; and 2) the operations of the bureaucracy. In relation to the former, the section includes some current theory and evidence on understanding the underlying nature of state-business relations and why such relations have developed the way they have in specific country contexts. This then leads to some generalised, and specific, activities that could be used for changing or improving such relations. The most challenging idea found in the literature for improving business-state relations is the “joint discovery process” idea that IP is a joint task to be shared by business and government. Again some theory the operations of the public service and bureaucracy is explored but the focus is mostly on specific ideas to improve IP performance in sub-optimal conditions, including very challenging ideas such as: the acceptance of second- best institutions, the idea of islands of excellence as short-term fixes, and the notion that IP tools may need to be designed and focused based on existing institutional strengths and weaknesses. Section Five concludes.

THE DEPARTURE POINT

In its most basic guise, the traditional heterodox economic argument underpinning its industrial policy prescriptions is based on an understanding that the economies of less developed, poorer countries are characterised by low value added production, low levels of diversification and global uncompetitiveness. To establish higher growth prospects, heterodox economists argue, these economies need to industrialise and increase manufacturing output and employment. Manufacturing is viewed as a special driver of growth – superior to growth driven by any other sector (agriculture, mining or services). The superiority arises because of manufacturing’s dynamic economies of scale, strong backward and forward linkages, strong properties of learning by doing, innovation and technological progress. The theory shows that increased and diversified manufacturing can be effectively achieved only if these countries are able to access the global market and become competitive exporters. The heterodox view is that the best way to achieve this is to catch up to developed and advanced nations through technological leapfrogging. Technological leapfrogging and technology transfer can be achieved using various channels, most notably the entrance of multinational corporations (MNCs) into a domestic economy and/or technology licensing for domestic firms. This leapfrogging allows lagging countries to defy their comparative advantage and catch up to advanced countries more rapidly and at a lower cost.

The heterodox policy design to compel and support this economic causal chain is most commonly identified with the industrial policy approach of the Asian Tigers, the most successful exemplar of which is South Korea. Certainly for much of the 1990s (the period in which South Africa's industrial policy framework was being conceived), the South Korean experience was viewed as the roadmap, benchmark and blueprint for developing countries wishing to support economic growth and development through rapid industrialisation.

The policy prescription revolved around a view which saw the existing economic structure of the lagging economy as sub-optimal because of fundamental market failures such as asymmetry of information, externalities, entrepreneurial rent amelioration and co-ordination failures. In response, the state would intervene as a developmental player to deal with such failures and create new opportunities in specified new sectors. The approach was diametrically opposed to the Washington Consensus view which suggested minimising the role of the state and limiting industrial policy to generalised, soft, horizontal interventions which improved the operating environment for all firms. The generic developmental state policy prescription was to support infant industries in new, diversified manufacturing sectors. This was to be achieved through a combination of strong industry-specific policy tools including: trade protection through tariffs, incentives to access new technology, incentivising learning, and export support and incentivisation. Most incentives were linked to export performance as exports were central to the overall approach. Exports crucially introduced competition into economic activity and hence supported productivity growth. Exports also supported access to foreign technology and most importantly they allowed countries to produce goods for markets other than their domestic markets, and this was the basis for diversification and specialisation. Exchange rate policy to support the infant industry export-orientated approach played an important supportive role in this IP approach.

South Korea's shining success following this recipe allowed it to achieve gross national income (GNI) per capita increases in a period of only 20 years, which had taken first generation industrialisers such as the US and Britain an entire 100 years to achieve in the 18th century. This rapid growth inspired developing nations to replicate the ideas of South Korea and other Asian Tigers, and a wave of South Korean-type policies were designed and implemented throughout Asia, Latin America and Africa.

In the first decade of the 21st century it became increasingly obvious that this IP approach had been reasonably successful in some parts of Asia but had been less successful in most Latin American and African implementing countries. Supporters of the neoclassical view of IP saw these failures as confirmation that developing countries were "not up to the task" of running interventionist, sectorally focused industrial policies and called for a return to laissez faire, Washington Consensus approaches. Heterodox economists, on the other hand, sought to dissect and understand the pathology of the developing country failures. They soon realised that by and large (although not completely⁴) the economic causal logic demonstrated in South Korea's success was in fact still relevant and operational (albeit constrained by the new global order). Rather it was the difference in the power of the state that appeared to be the best explanatory variable of differing IP experiences.

⁴ Two big adjustments in thinking included acceptance that learning did not occur automatically and that a nation's absorptive capability may be low and need to be incentivised to assist in successful leapfrogging. It was also noted that there was a notable and important loss of policy space for countries seeking to follow the South Korean route in the 1990s and 2000s which made an equivalent approach considerably more complex. These issues are dealt with in the new global order literature review in Section Two.

This made intuitive sense as the economic underpinning of heterodox IP theory (as shown in South Korea's success) is based on a series of activities to be undertaken by the state. Specifically in the South Korean model, the state must create new incentives and opportunities for business. These must be balanced with a system of compulsions to supplement the discipline of the market. The balance of incentives and compulsions ensures that the state and society achieve value for money for their IP interventions. This ability to marshal rent-seeking and capitalist behaviour by businesses emerged as a crucial ingredient in countries which successfully implemented IP, and was absent in those who had faced IP failure. This revelation catalysed a shift in industrial policy thinking to overtly take into account political economy and the power of the state in developing and implementing industrial policy.

This paper views the new emergent themes and issues arising in this literature as particularly relevant and useful for improving the outcomes of South Africa's National Industrial Policy Framework (NIPF). The new IP thinking suggests entirely new questions which can be asked in trying to unpack why existing IP in the extant local operating context is performing sub optimally. These questions allow for a fundamentally deeper diagnosis of underlying constraints than is currently the norm. They also raise issues of political economy in a manner which is non pejorative and immensely practicable. This allows "elephants in the room" to be acknowledged and crucially for policy to be designed taking such constraints into account in a constructive a controlled manner.

Together with new questions, current heterodox thinking also confronts policymakers with a variety of challenging but nevertheless practical and immediately implementable opportunities to improve domestic IP outcomes *within* existing policy, institutional and political economy settings. The relevance of this must be emphasised, as in the current South African context there is little appetite for a serious review of the NIPF. The drafting and adoption of the NIPF was highly contested and drawn out, beginning in 2001 with the circulation of a first draft and the final acceptance of the framework in 2007. Despite its seemingly innocuous appearance, the NIPF actually ranks as one of the most contentious policies adopted since 1994. Every aspect of industrial policy is contentious: the metanarrative, the underlying ontological construct, the usefulness of generalised learning, stylised facts, the drivers and determining variables of IP content, spheres of influence, actual content, mechanisms and instruments of implementation, stakeholder roles and responsibilities, and monitoring and evaluation. The contentious nature of industrial policy in general, and in South Africa in particular, is not a function of the sheer volume of issues at hand. This volume makes industrial policy complicated and difficult but not necessarily contentious. Rather, industrial policy is so contentious because it is an indicator of existing (and potentially future) power relations and access to rents. Industrial policy is at its core an expression of the balance of power in a country; and a predictor of who will benefit and who will be excluded from current and future economic rents. It is little wonder then that currently there exists little appetite, and no champion, for a state-led review of the NIPF and/or Industrial Policy Action Plan (IPAP)⁵. This is actually just as well – as a formal, official review of the NIPF would (at best) be of little value, and (at worst) potentially quite destabilising in the current operating conditions of the economy and polity of the incumbent government.

⁵ IPAP is the Department of Trade and Industry's three year rolling action plan which guides the implementation of the NIPF.

NEW GLOBAL ORDER LITERATURE

By 2016, many heterodox economists began questioning whether the Asian Tiger success stories remained relevant in the current global operating environment. These economists were of the view that, while useful lessons could definitely still be learnt from the Asian Tigers, operating conditions had altered so significantly that any attempt to replicate the path of manufacturing-led industrialisation through technological leapfrogging supported by strong sectoral intervention would now be unlikely to succeed. Their point is that while the economic logic and stylised facts underpinning Asian Tiger structural transformation remain intact, the new global order is so markedly different to that faced by Korea and Malaysia in the 1980s and 1990s that replication of the traditional approach will either not be possible or will not yield equivalent results.

A large and diverse list of possible drivers and variables responsible for these “decreased manufacturing-led industrialisation growth opportunities” can be found in the literature (Naude 2010a, 2013; Weiss 2013; Khan 2007, 2009; Pack and Saggi 2006). Most arguments fall within five broad categories: 1) increased globalisation of the world economy and specifically the rise of global production sharing; 2) the dilemmas posed by recent food, fuel and financial crises, 3) climate change, 4) shrinking policy space and 5) the rise of China and India as centres of manufacturing. Each is briefly considered.

The impact of increased globalisation on the growth opportunities for developing countries is multifaceted, highly diverse and constitutes an entire body of literature all by itself. In this section only three facets are touched on: industrial concentration as a function of agglomeration, reduced trade policy space, and value chains. The agglomeration argument (often called the theory of new economic geography [NEG]) explains the inequality in the spread of industry across regions as a function of existing industrial agglomeration. Mayer (2004) shows that the current concentration of industry reflects the tensions between agglomeration externalities and production costs and that this does, and will continue to, limit growth opportunities for lagging economies in Africa and Latin America, especially given the growth trajectories of India and China.

The NEG logic starts with the observation that initially industrialised countries have higher wages than developing countries. Developed countries, however, enjoy positive externalities created by linkages among industrial firms. These externalities compensate for the higher wage costs. However, as world demand for manufactured goods increases, wages in developed countries increase and “the spread of industry is triggered” due to a growing wage gap between industrialised and developing countries. “At some point the wage gap becomes too large to be compensated by the benefits coming from linkages in the industrialised country, and industrial firms start to relocate to low-wage economies” (Mayer, 2004 p.6).

NEG argues that once this spread is triggered, the choice of destination country hinges on “very small initial differences” (Naude 2010b p.2) among competing developing countries. Differences include: quality of transport links, ease of access to imported intermediate goods, and ease of export. NEG goes on to argue that industrialised countries relocate manufacturing to countries with a more investment-friendly environment but even more importantly to countries where some level of industrial activity already exists so that some benefits of agglomeration can be enjoyed. The idea is that you need industry to attract more industry. Collier and Venables show that this logic has good explanatory value in understanding why several African countries (especially those dependent on commodity trade) “missed the globalisation boat vis-a-vis East Asia” (2007 p.38). The point highlighted is that while trade liberalisation and the promotion of a country’s conducive investment business climate are important – to attract global production on scale – a country also needs to

either maintain its current industrial base and avoid premature deindustrialisation, and/or directly intervene through IP to establish an indigenous productive base of sufficient scope and depth as to afford foreign firms some agglomeration benefits.

Creating an industrial base and trade policy have always been intricately intertwined in IP. New theory, however, suggests that the ability to design and implement trade policy in support of attracting foreign firms and production sharing in the modern era has been substantially reduced. Trade has always been a crucial channel for lagging economies to harness gains from globalisation. Trade not only allows for manufacturing diversification but importantly it allows access to foreign technology. In all previous eras, structural transformation and export diversification have been achieved through some degree of industrial policy protection - tariff protection, infant industry subsidies or direct grants. The current problem faced by developing countries is that it is advanced countries which have already developed their diversified manufacturing bases that are now making the rules. It appears that now that these countries no longer need tariff (or infant industry) protection they are removing the possibility of other countries enjoying or using such tools.

Weiss (2009), Altenberg (2009), Pack and Saggi (2006) and Shaffaeddin (2006) all argue that the wave of trade liberalisation started in the 1990s is “a policy of the economically strong adopted when their economies were already competitive enough” (Weiss, 2009 p.7) to successfully operate in global markets. They show that the impact of trade liberalisation on developing countries in the 1990s and early 2000s is fundamentally different to the liberalisation experience of (previously lagging) now developed nations. When developed nations liberalised their trade regimes their domestic firms were already internationally competitive. For current late industrialisers, trade liberalisation is coming before their domestic firms are internationally competitive and before they can compete with cheap imports. This has led to premature trade liberalisation which has not only led to the premature exit of domestic firms from the local market but has fundamentally altered how trade policy can be used as a tool in industrial policy. Linking this to the NEG argument, reduced trade policy space undermines a developing economy’s ability to maintain an existing base of industrial activity which may still be struggling to meet global competitiveness standards. It also directly limits the scope of interventions available to policymakers to create a base if one does not yet exist. With the ability of a developing country to create agglomeration effects severely hampered, the global concentration of industrial activity identified in the NEG literature will be perpetuated and reinforced.

At a more generalised level, authors such as Ul-Haque (2007), Rodrik (2009) and Chang (2009) argue that new governance mechanisms for international trade and investment covered by the World Trade Organization (WTO) and related multilateral and bilateral agreements illustrate that today the very IP tools used by advanced countries to protect and support their own industrial development are now the very tools which have been outlawed – to the detriment of developing countries. This has led to Chang’s (2002; 2003) famous accusation that industrialised countries have “kicked away the ladder” for industrial upgrading in lagging economies. Some authors claim that these reduced policy space arguments are exaggerated and that WTO regulations do allow room for the very poorest countries to create space in which their local firms can become competitive. Naude (2013) considers the contention and finds that some space and some avenues do indeed exist, but that they require considerably more effort on the part of policymakers for considerably less growth space than was the case for policymakers industrialising before the 1990s.

Finally, in relation to the globalisation argument, substantial new thinking has emerged on the role and implications of value chains in industrial policy. The simplified global value chain argument is

that in the modern era a country's industrial policy growth opportunities have been diminished by the rise and success of large multinational production enterprises and buyer-led networks. Buyer-led firms dominate most industries including the retail, transport, capital equipment and pharmaceutical sectors. These firms are vertically specialised and outsource parts of the production process or production activity to relevant global locations. Because these leading firms establish private standards, firms from developing countries wishing to break into these chains need to meet these private (and ever-increasing) standards. Several consequences for growth through industrialisation arise from this. Ul Haque (2007) argues that as a result of these chains and the accompanying market concentration they have ushered in, the labour cost advantage of developing countries may no longer be as relevant as it was in the 1980s and 1990s. Hart (2001) argues that the dominance of these supply chains has reduced the likelihood that a strategy to promote national value chains will be successful; while Collier and Venables (2007) stress that designing an appropriate tariff structure (if such a thing is actually possible) becomes increasingly more difficult as the distinction between intermediate and final goods becomes increasingly blurred due to these chains. Baldwin (2011) when looking at industrialisation in BRICS (Brazil, Russia, India, China and south Africa) suggests two additional shifts. He argues that value chain management and production sharing has become so sophisticated, and private standards so high, that lead buyer firms are now looking to trade in tasks rather than complete products. On the upside, this allows a developing country to join an existing value chain without needing to create the competence and internal linkages (agglomeration) to produce an entire product. On the downside, this type of task-based trade and industrialisation will provide less meaningful industrialisation and growth benefits than the product-based industrialisation of the Asian Tigers in the 1990s. An additional downside is what Baldwin refers to as value-chain capture whereby a lead buyer can extract ever increasingly better terms because they know the country cannot afford to lose their highly specialised market access. Baldwin suggests that domestic innovation is the only protective option available to developing nations in this context. Overall the consensus view is that value chains have developed in a way that limits the scope and benefits available to countries seeking to industrialise in the current era.

In summary, the three aspects of the globalisation and production sharing literature touched on in this section make a compelling argument that the operating environment facing developing nations in the current era is fundamentally different to the environment faced by the last generation of industrialisers such as South Korea and Malaysia. The narrowing of trade policy space fundamentally impinges on any of today's countries which wish to develop new industries that are in some way protected until they are able to compete internationally. This in turn undermines the ability of developing nations to create sufficient agglomeration of industries to attract foreign firms. Finally the rise in power and sophistication of value chains and the new sharing of production activities based on tasks rather than complete products all once again show a more challenging environment within which lagging economies must seek growth opportunities. In this new environment many of the experiences of South Korea and Malaysia are less relevant than they were 15 years ago.

A second category of new global order issues relates specifically to China and India and their impact on the growth opportunities and prospects facing developing countries seeking to undertake manufacturing-driven growth policies. Naude designates the two as the Asian Driver (AD) economies Naude (2010a, p.14). The AD argument, made by writers such as Kaplinsky and Morris (2008) and Carmody (2009) is that India and China have grown to dominate global markets for low and medium-cost manufactured goods. This means that developing countries in Latin America and Sub-Saharan Africa are not just competing with traditional developed economies but also with AD economies – a situation markedly different to that faced by the last generation of late industrialisers. The Asian

driver economies are seen to throw up two challenges. First they are viewed as a direct risk to lagging economies because of the terms of the relationship between them. Second they are viewed as an indirect threat as they will compete with other developing countries for limited foreign direct investment (FDI) flows.

The direct relationship risk argument is that AD's interest in other developing countries is limited mainly to accessing raw materials and is reminiscent of the colonial era. Kaplinsky and Morris (2008) for example show that Africa exports mostly commodities and not manufactured goods to both India and China; while Jenkins (2008) shows the same trend in Latin America. As AD economies increase their demand for unprocessed commodities they drive the price of these commodities up while at the same time exporting labour intensive manufactured goods at declining prices. Jenkins (2008) and Naude (2010a) claim that the relevant fear in the current era is that "(i) the AD's economies' trade with industrially lagging economies will tip their terms of trade against manufacturing, and (ii) that local manufacturing will not be able to compete with imports from China" (Naude, 2010a p.16). The question Naude then poses is whether, in the face of this Chinese competition, lagging economies can follow the strategy of advanced countries (to upgrade their production of manufactured goods) as a pathway to growth? Alvarez ad Claro (2009) analysing the Chilean economy, Carmody (2009) looking at Zambia and Kaplinsky and Morris's (2008) work on Sub-Saharan Africa all generally conclude that in each instance the ability of firms to escape China's import competition is limited.

Equally harmful to lagging economies is the role AD economies play in changing the access and character of FDI flows. Several points are relevant. First, FDI from advanced nations is flowing to AD economies in preference to lagging regions for reasons explained in the new economics of geography model above and due to the massive population concentration and rising incomes of India and China. Second, FDI from AD economies to lagging economies is increasing but to date is directed mainly at the mining, infrastructure and energy sectors. These investments are made as part of the AD's extractive colonialism approach to raw material access in support of their own, domestic industrialisation plans. Finally, when AD economy FDI is made into the manufacturing sectors of lagging economies, initial data shows that this is at the expense of domestic firms, with Carmody and his 2009 work in Zambia showing that Chinese investment in Zambia is crowding out local firms and that there is a "competitive displacement" of manufacturing in Zambia by Chinese firms.

Climate change is a third new global order issue which has a substantial impact on the growth opportunities available to current lagging economies in their pursuit of industrialisation-led growth. The climate change debate in relation to the industrialisation of developing countries is nascent and extremely controversial with essentially no consensus on any of the issues or their implications on development pathways. Pendleton (2009) notes that most of the current stock of carbon in the atmosphere is due to the fossil fuel-based advanced economies' growth and industrialisation over the past 150 years. Advanced countries had the freedom to industrialise without the burden of taking the environment into account. For today's lagging economies any industrialisation push needs overtly to take into account local and international pressures and concerns about greenhouse gas (GHG) emissions and dependence on fossil fuels.

The general developmental view is that developing countries entering onto a path of industrialisation require cheap energy rather than clean energy. Many of these countries have access to plentiful coal reserves and make the argument that they could forego increasing their carbon emissions through the use of coal energy only if they were adequately compensated by advanced countries to do so. While some advanced countries accept this logic and buy into the

prima facie case for compensation, others do not. A third view which is gathering momentum in advanced economies is the technology view which seeks to minimise the need for financial compensation. Writers such as David (2009) and Schelling (2009) suggest that advanced nations, instead of paying the developing world not to generate GHGs, rather invest that money in large-scale research into how to capture and store carbon emissions (Carbon Capture and Storage [CCS] technologies). Once appropriate CCS technologies are developed and transferred to developing nations, these countries could continue to use their coal deposits to foster industrial development, decrease their impact on the environment, and avoid huge adjustment costs. As a bonus, the advanced countries could similarly continue using fossil fuel reserves and energy infrastructure without exacerbating global warming.

While the scientific community push the boundaries of research and development (R&D), innovation and human ingenuity, and technology to avert an environmental Armageddon, economists, policymakers, modellers and trade specialists have been focusing on carbon pricing and possible carbon-based import tariffs. This could carve out a specific new industrialisation growth path for developing nations, if certain trade conditions are established and globally accepted. In the early years of the 21st century, economists were temporarily buoyed by the idea that greening the global economy and dealing with GHG emissions could create unique opportunities for developing countries and specifically industrially lagging economies. The view was that if carbon taxes and emission regulations in advanced countries became sufficiently onerous and restrictive, many carbon-intensive heavy industries would relocate to developing countries with lower carbon prices and fewer constraints. The types of sectors which would relocate would be dirty industries such as paper and pulp, iron and steel, metals, petrochemicals and cement. The relocation of such activities would allow developing nations to begin to add value to their natural resources which historically were exported without any value adding beneficiation. However, the opportunity was soon seen to only be an opportunity if advanced countries did not then impose import tariffs on goods from countries with lower carbon prices. Naude quotes Mattoo et al's 2009 computable general equilibrium (CGE) model which estimates that an across-the-board import tariff based on the carbon content of imports to the US would correspond to that country imposing a 20% import tariff on China and India. This means that carbon-based import tariffs would dilute any temporary benefit for the developing country and nullify the opportunity as a sustainable path of industrialisation and growth. Mattoo et al (2009) suggest that developing countries should pressure the WTO for a ban on carbon-based import taxes – a suggestion which is unlikely to be realistic in the current era.

A final (but associated) challenge or opportunity for late potential industrialisers is the interrelationship between climate change, energy pricing and food security. This issue was not on the radar screen in the 1980s or 1990s and the last generation of manufacturing-led industrialisers focused almost exclusively on manufactured goods in light and heavy industries. No literature was found which suggested that countries like Malaysia or South Korea thought about green energy and agrifood industrialisation options. Today, however, a growing number of economists believe could create important alternative growth opportunities for lagging economies.

With the financial crisis of 2007 attracting the lion's share of global attention, the international food crisis of 2008 has largely been forgotten or minimised. Some economists argue, however, that the issue needs to urgently be put on the global agenda as they believe that the causal chain of events which saw basic cereal prices double in only four months can and (in all likelihood will) be replicated multiple times in the future. They suggest that food security is a systemic issue and developing countries need to deal directly with the challenges it will usher in. The argument is based on the fact

that agriculture's two major inputs (water and fuel) are both depleting⁶ resources whose prices can be expected to rise over time. The 2008 food crisis is interesting insofar as it shows the interconnectedness of the current global operating environment. Following the financial crash, speculators moved out of the securitised property market and into securitised commodity and oil markets, driving up their prices. As fuel prices rose basic food prices increased as, for example, a hectare of maize in the US requires 40 litres of petrol and 75 litres of diesel from planting to harvesting (Monbiot 2009). In addition, the massive increase in fuel prices increased the demand for bio fuels, decreasing the planting of food crops and substituting them with crops for fuel. The end effect was that the Food and Agricultural Organization (FAO)'s food index which is set at 100 for the base year 2000 rose to 205 in 2008 and triggered the largest global food crisis since 1974 (FAO, 2009, p.2).

These events have prompted economists such as Santos-Paulino and McGillivray (2009) to suggest that domestic resilience in developing nations is increasingly important in the modern era as negative exogenous impacts are more quickly and more extensively felt globally than at any other time in human history. They relate this need for resilience to the need for structural transformation. They argue that developing countries need to do two things to improve their resilience and create conditions for growth and development. First, they should accelerate their structural transformation specifically to reduce country risk to increasingly regular and severe external shocks. Second, they suggest that developing nations looking at industrialisation as a path towards growth and development consider agriculture to be an industry (and an important industry at that). Wallgren and Hojer (2009) argue that just as South Korea used technology to leapfrog its manufacturing base, so currently lagging economies should use technology to stimulate the next generation of agriculture which is less fuel, energy and water intensive. Technological upgrading of agriculture and the industrial policy implications for such a transformation are exactly the same as in the case of a specific manufacturing sub-sector. The only difference in the food scenario is that the ultimate goal is probably more about domestic price stability than improved exports; although the potential for increased global trade in food once the effects of climate change are more directly felt are estimated by some as an opportunity for growth for developing countries. Reardon et al (2009) and Galtier (2009) both suggest that the industrialisation of agricultural primary production is now a real requirement and that efficiency improvements at the primary level should be replicated across the entire domestic value chain, resulting in a agrifood industry that includes both traditional primary agricultural production and the manufacturing sub-sector of food processing.

The literature reviewed in this section argues that irrespective of a country's specific circumstances, several global changes have occurred which will impinge on any national effort to seek growth through manufacturing-led industrialisation. The changes include: a reduction in policy space, the kicking away of the protectionist tariff ladder by advanced economies, the food and fuel crises of 2008, the rise of India and China as hubs of low cost, high-volume manufacturing, the operations of increasingly concentrated firm-led global value chains and production sharing, and the need for industrialisation to be environmentally friendly. As a result, 21st century pathways to growth are likely to look substantially different to the paths followed by yesteryear's lagging economies which have become today's advanced economies. New global order scholars believe that the scope and magnitude of the new operating environment for industrial policy is sufficiently different that the content of IP must continue to be a substantial area of focus for development economists.

⁶ Water is viewed as a resource which will become increasingly scarce due to global warming and climate changes which will negatively affect rainfall.

Statehood Literature

IP economists who find themselves in the statehood heterodox camp do not deny the importance of the new global order challenges but believe that their importance is secondary to the capacity and capability of the state to actually implement a given basket of policy measures. The argument is simply that even if a country has the best IP content and policy in the world if it is powerless or constrained in its ability to implement such policies effectively, the quality and content of the paper policy is immaterial for outcomes and results. There are two distinct approaches to statehood in economics. The first is that espoused by traditionally neoclassical, conservative economists in organisations such as the World Bank and OECD. Chang (2010) refers to this view as the Global Standard Institutions (GSI) approach. The second approach is associated with more heterodox and left-of-centre views.

Orthodox Statehood Literature

The World Bank and OECD approach to statehood finds its roots in the neoclassicist critique of the developmental state and strong IP. Orthodox economists argue that IP had failed to work in Latin America and Sub-Saharan Africa because such countries are characteristically: 1) constrained by structural factors e.g. geography, history, bad culture; 2) their natural resources make successful IP unlikely; 3) they are hampered by political economy factors; and 4) they have limited bureaucratic capabilities. This view has led such economists to call for Latin American and Sub-Saharan African countries to abandon interventionist IP approaches and to return to the Washington Consensus fold in which the role of the state is minimised and limited to creating a conducive environment for all businesses. By 2012 these organisations came around to the reality that lagging economies were continuing to pursue IP approaches based on a strong developmental state and specific sector identification and support. As such they realised that to make a difference they needed to partially concede the interventionist point and focus on how to improve the effectiveness of such policies in the developing world. The OECD's "The Missing Piece" (2012) marks this shift in view.

The neoclassical view on the state, and their core concept of the fragile state revolves around what a fragile state lacks not what a fragile state is. The OECD suggests that "states are fragile when state structures lack political will and/or capacity to provide the basic functions needed for poverty reduction and development" (OECD, 2007 p.5) In 2012 this definition was expanded to include the idea that "a fragile state has weak capacity to carry out basic governance functions and lacks the ability to develop mutually constructive relations with society. Fragile states are also vulnerable to internal and external shocks such as economic crises and natural disasters" (OECD, 2012 p.19). The World Bank adopted this view and attempted to increase the rigour of understanding state fragility by measuring it. It identified 16 variables in four categories which when enumerated provided a positioning of a state along the spectrum of fragile to resilient states. The categories are: economic management, structural policies, policies for social inclusion, and public sector management and institutions. The process created the GSI index in which "better" institutions looked like those typically found in Anglo-American countries and which maximised market freedom and the protection of property rights.

The methodology and its subsequent policy implications are simplistic and reductionist. They essentially involve the view that if a country receives a low score, policies and interventions should be enacted and implemented so as to move the state to a higher score. This higher score is based on the policies and institutions of advanced economies which are deemed to be highly resilient effective states (e.g. the US, European Union countries, Scandinavia) and therefore the benchmark to which lagging economies should aspire. As Rodrik puts it, the World Bank and WTO best-practices

approach to statehood “presumes it is possible to determine a unique set of appropriate institutional arrangements ex ante and view convergence towards these arrangements as inherently desirable” (Rodrik, 2008b p.2). This implies that an effective state can be understood as a generic concept irrespective of a country’s context and history.

This view has received withering criticism from heterodox economists (Rodrik 2008b, Chang 2011 Hausmann 2007). It has also been substantially undermined by empirical research which shows that using the World Bank measurement scale, Sub-Saharan African countries do not actually perform all that badly, with 14 of 29 states classified as fragile actually matching scores of countries categorised as average by the Bank (Gisselquest, 2015). What appears most lacking in the approach from the perspective of this paper is that this view does not provide an understanding of how a state got to be in its current form and what possibilities exist for it to be changed; and how this statehood impacts the design and implementation of IP. To find these answers, a review of a heterodox view of statehood is required.

Heterodox Statehood Literature

The heterodox approach to statehood came about as a specific response to economists trying to understand why developing nations in South America and Africa (generally) failed to achieve South Korean type impacts from equivalent industrialisation policies. Based on the success of these Asian Tigers, statehood theorists felt happy that the developmental state economic causal argument remained in effect and relevant, despite a contraction of opportunity within the new global order. In looking at elements of the role of the state and its behaviour they found two stylised facts on differences between the Asian Tiger experience and the African and Latin American IP experiences. The first identified fact was that learning and leapfrogging were not automatic responses and that in Africa and South America substantial friction in the response of entrepreneurs and institutions limited the absorption of new technology, innovation and learning. If learning was not automatic or frictionless then for IP to be successful, lagging countries required a social capability and an absorptive capacity to benefit from leapfrogging and enjoy a catch-up dividend. This led to the second stylised finding. If indeed the state needed to support learning and absorption capacity and capability then the ability of the state to create incentives and enforce compliance became an issue which IP needed to address. This understanding of the failures of the IP Asian Tiger experience in Latin America and Sub-Saharan Africa ushered in the heterodox economists’ interest in statehood and the journey towards the inclusion of politics, governance and power relations into IP theory.

Any review of heterodox IP thinking on the functioning of the state begins with the pioneering work of Wade (1990), Evans (1995) and Kholi (2004). Their combined work creates a spectrum of different types of states with varying characteristics of effectiveness in designing and implementing industrial policies. All three share important key observations. First they all show that a country’s position on a spectrum of different types of states will change over time and is path dependant. This implies that political, governance, institution, policy and economic decisions taken in the past will directly and indirectly affect the current look and functioning of the state. As such any understanding of statehood must include a historic analysis and will be time specific. The second common element among all three writers is their identification of three distinctive characteristics or aspects of state functioning which are pivotal in industrial policy. Although they use very different terminology the three focus issues are: 1) the power, autonomy and motivation of the government to set developmental goals for the country; 2) the quality of state-business relations; and 3) the autonomy to enforce the state’s policies on the business community. These three characteristics and the balance between them are the substance and focus of the seminal heterodox literature which will be

covered in the next section and which constitutes the focus of this paper. The foundation work of Wade, Evan and Khohi is covered in the remainder of this section as it is the theoretical foundation for the work of Chang (2011, 2012, 2013, 2014), Rodrik (2007, 2008a, 2008b, 2011) and Khan (2007; 2008).

The three pioneers all create typologies of different types of states with differing characteristics. They then show how certain of these characteristics support successful IP design and implementation, while other characteristics undermine IP design and implementation. All three approaches find their origins in the work of British sociologist Michael Mann who in 1984 published his seminal work *The Autonomous Power of the State: Its Origins, Mechanisms and Results*. Although the work does not include any reference to IP, it is the text which provided the initial approach and terminology used by economists to express political economy factors.

Mann believed that the “state is undeniably a messy concept” (Mann, 1984 p.112) and that the problem with defining the state is that definitions focus on an “institutional” description of how a state looks – but omits any description of “function” and what the state does. This critique was true in economics when traditionally a Weberian⁷ definition of the state was employed, which was mostly institutionally and not functionally based. Mann’s work moved away from this institutional view and focused on state functionality. The functional aspect he believed most important was state power with respect to non state actors.

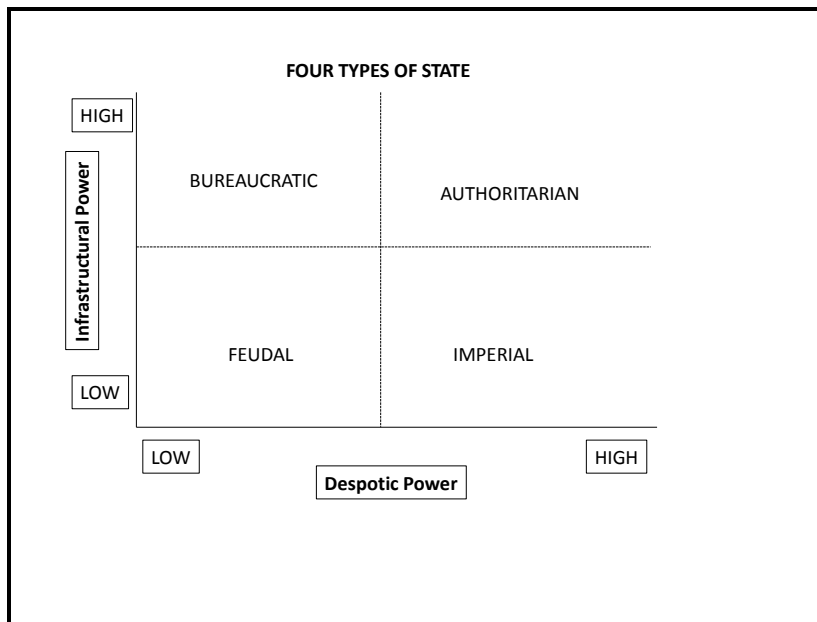
Mann describes two dimensions of power. The first is called “despotic” power. This describes the power of the state (state elite) *over* civil society. In other words, “the range of actions which the elite is empowered to undertake without routine, institutionalised negotiation with civil society groups” (Mann, 1984 p.113). Mann amusingly illustrates the concept by suggesting that great despotic power can “be measured most vividly in the ability of those in charge to shout ‘off with his head’ and have their whim gratified without further ado” (Mann, 1984 p.113). Despotic power and the concept of autonomy (a term introduced by Wade) are intertwined. Autonomy is a measure of how “separate” the state or the state elite are from society. If the state can exercise decisions independent of the private interests of any grouping in society then that state is deemed to be autonomous and hence it would have a high level of despotic power. On the other hand, a state may have low despotic power if it is not autonomous. If the state or state elite are intimately tied to non-state groupings such as tribe, clan, ethnic or communal groupings then these loyalties will impinge on the state’s ability to make decisions independently. A lack of autonomy and low despotic power thus exists when the state is “captured” by some form of outside party or interests.

Mann’s second type of power is “infrastructural” power and describes “the power of the state to penetrate and centrally co-ordinate the activities of civil society through its own infrastructure” (Mann, 1984 p.114). This essentially talks to the organs, channels and mechanisms of state to pursue their goals and plans. Mann puts the despotic and institutional dimensions of power together to derive four stylised types of states⁸.

As state power in each dimension can be high or low, four stylised types of state can exist.

⁷ Weber’s state comprised four main elements: 1) a differentiated set of institutions and personnel, embodying; 2) centrality in the sense that political relations radiate outwards ; 3) territorially demarcated areas, over which it exercises; and 4) a monopoly of authoritative binding rule-making.

⁸ In Mann’s analysis the two dimensions are analytically independent. What emerges in the current seminal heterodox work is that it is the balance and interplay between the two which has the highest explanatory value in understanding different countries IP experience. This is dealt with in detail in the next section.



Own Design

The feudal state is the weakest type of state and the best examples are found in medieval Europe when governing was largely achieved indirectly using infrastructure freely and contractually provided and controlled by the principal and independent clerics, magnates and towns. The imperial state possessed its own governing agents but had limited capacity to penetrate civil society without assistance of power groups. The bureaucratic state is characterised by high organisational capacity but importantly it cannot set its own goals. The bureaucratic state is controlled by others/outside, but their decisions once taken are enforceable through the state's infrastructure. The authoritarian state is an institutionalised form of despotism. In this situation the state exhibits high degrees of despotic power over civil society while having the infrastructural power to enforce it. Mann suggests that Nazi Germany is a good example of such a state. Mann concludes that most contemporary capitalist democracies are some form of a bureaucratic state.

Wade (1990) looking at the role of the state in South Korea, Taiwan and Japan provided the first account "that offered both an alternative economic model of East Asia's growth and a fully developed political account" (Haggard, 2004 p.2). His economic explanation centred on the concept of "market guidance" in which the state influences the allocation of resources made by the private sector through a series of incentives and compulsions. His political account took Mann's authoritarian state (which Wade referred to as corporatist authoritarianism) and directly applied it to industrial policy, arguing that it was this particular corporatist authoritarian political arrangement which provided the basis for market guidance. According to Wade, the states in East Asia conferred enough autonomy on a centralised bureaucracy for it to be able to influence resource allocation in line with the long-term national interest. This national interest sometimes conflicted with short-term profit maximising, but the despotic power of the state (its autonomy) was such that, Wade noted, the state could ignore the demands of the private sector (and labour and the left) while maintaining the credibility to provide overall direction to the economy. Wade called this the "hard state" (Wade, 1990 p.337) and concluded that state effectiveness in IP was "a function of the degree of insulation (autonomy) from the surrounding social structure" (Wade, 1990 p.375).

In 1995 Evans published his seminal work (Embedded Autonomy) which took the foundation work of Mann and the application of Mann to IP provided by Wade to a more textured and nuanced level. Basically Evans agreed with Wade that economic developmental outcomes depend on the general

character of state structures, but he suggested that the intention of the state was a distinct and pivotal variable that needed to be accounted for. As such Evans added to the heterodox IP approach the idea that structure matters but so does intention. To understand a state's intention, Evans needed to understand what power relations drove the state, how the state acquired knowledge, and how the state was able to implement its intentions. Building on the typologies of Mann and Wade, Evans introduced into the economic lexicon the term "the developmental state" and its antithesis the "predatory state". He also suggested that a continuum of states existed between these two extreme forms which he called intermediate states. He foresaw that it was possible over time for a state to move along this continuum (in both directions). By far, however, Evans's seminal contribution to our current view of IP is the notion of embedded autonomy. This concept remains the foundation of current heterodox IP thinking.

In the Evans model, the developmental state exhibits high levels of despotic power and autonomy⁹. The developmental state is thus able to independently formulate its own goals in isolation of any demands from any non-state actors (including labour, business, ethnic grouping, the left, or foreign MNCs). In a developmental state, the intention of the state and its use of its despotic, autonomous power is for the benefit of society and in South Korea, Japan and Taiwan involved achieving economic growth and development through technological leapfrogging and the growth of the manufacturing sector¹⁰. Simultaneously Evans found that the developmental state also exhibits high levels of institutional power, characterised by exceptionally competent, cohesive and coordinated state institutions, agencies and networks. The bureaucracy in the developmental state is not only extremely competent but it too is isolated from external influence. Bureaucratic autonomy is achieved because of the state's autonomy. So, in Evans's view, isolation and autonomy of the state and its implementing arm, the bureaucracy, were of paramount importance in explaining the success of interventionist IP in Taiwan, Japan and South Korea. This left him with the difficult question of how the autonomous state came by the necessary knowledge and information to direct the trajectory and content of its industrial policies and implement its associated activities.

He observed that a key characteristic of all three developmental states he was researching was a seemingly counter-intuitive intimate relationship with business. He observed that despite the state's autonomy and independence in decision-making, the state relied heavily on the private sector and capitalist class to access crucial knowledge. He observed extensive networks and multiple institutionalised and informal mechanisms and communication channels through which business and the state talked to one another. It appeared that this connectedness increased the competence of the state by providing state decision-makers with the relevant knowledge on which to make decisions, which improved the credibility of the state's decisions with the business community. This credibility was crucial as it allowed the state to discipline business and also to be flexible and to change policy when required. Neither discipline nor flexibility would be possible if the state did not enjoy credibility, and credibility was achieved only because the state had access to the most relevant information and knowledge available. The puzzle remained, however, how the state could have such an intimate relationship with business and be embedded with business but not be captured by business. Evans found that the threat of state capture was minimised because of the strength and autonomy of the bureaucracy. The bureaucracy in these states was highly capable and competent, career public servants were invested and rewarded for maintaining the effectiveness, efficiency and

⁹ Equivalent to Wade's "hard state" and Mann's "authoritarian state".

¹⁰ By contrast in the predatory state the intention of the state is to meet the needs of a small given group (tribal, ethnic, family, self enrichment) most often at the expense of society as a whole. In this situation the state is seen as a personal resource for the elite.

independency of the bureaucracy and the bureaucracy was isolated from direct influence of any state or non-state actor. As such the bureaucracy worked as a protection mechanism for the state whereby the state was free to intimately interact and maximise information exchange with business, but business remained unable to unduly influence the state because of the independent and competent bureaucracy. This idea of “embedded autonomy” remains the important departure point for the vast majority of current heterodox thinking covered in this review.

Evans’s examples of SouthEast Asian successes make the concept of a developmental state clear. His explanation of a predatory state is also clear. In his book, he uses the example of Mobutu Sese Seko’s Zaire. In this model¹¹ the state is captured entirely by private interests and thus has an inability to act in the broader national interest. There is no state autonomy in a predatory state as private interests (not state interests) set the goals for the country. As such the idea of embeddedness has no relevance. Infrastructurally in the predatory state there is no coherent and cohesive state apparatus. Where Evans’s case-study work and modelling become less clear but extremely interesting is on the explanation of the different types of states which operate between the two extremes of the developmental and predatory state. Evans calls these intermediate states and uses Brazil and India as two examples. The examples allowed Evans to deduce that competence of the bureaucracy was the key determinant in a state’s ability to achieve developmental impacts from its industrial policy efforts. In both Brazil and India, Evans showed that the state had highly complex relations with multiple non-state actors based on religious, regional, ethnic, landownership and other divisions. These multi-faceted complex relations undermined state autonomy such that the state was not autonomous in either country. Evans called these states incoherent, as often the goals they set to meet the expectations of one grouping contradicted the goals they aimed to achieve for another grouping. He noted, however, that in India, despite the incoherence of the state, the bureaucracy was coherent, largely competent, and independent, thus the country enjoyed some IP success. Brazil, on the other hand, suffered from an incoherent and less capable and competent bureaucracy and thus could wring out very little IP success.

Evans’s work on incoherent intermediate states was picked up by Kholi in 2004. Kholi’s work unpacks how autonomy and embeddedness can combine in different forms and create different types of incoherent states. Kholi introduces the subtle and important point that a country’s ability to successfully implement industrial policy will depend not just on state autonomy and state embeddedness, but on how the two combine and are balanced.

Kholi’s work is based on a comparative historic analysis of India, Brazil, South Korea and Nigeria and undertakes a detailed historical analysis of the countries, because in his view the core character of the state is often acquired long before it starts intervening in the economy to promote transformation¹². This historical analysis leads to a continuum of state typologies with three benchmarks. The first benchmark of how the state is organised by Kholi is the “cohesive capitalist” state. Cohesive capitalist states resemble Evans’s developmental state in that they are characterised by a strong centralised government and a powerful bureaucracy, which allows for the strict implementation of industrial transformation. Kholi’s cohesive capitalist state, however, adds a layer of understanding about the power of the developmental state by arguing that in the cohesive capitalist state, the government is able to manage the economy with an iron fist and ensure rapid industrialisation because it favours a narrow business elite (for example the handful of Chaebols in

¹¹ Equivalent to Mann’s feudal state where low despotic and infrastructural power dominate.

¹² This approach is favoured and developed by Marxian writers in the most current heterodox literature, some of which is referred to in the next section.

South Korea) and is prepared to undermine labour and put off human development goals in the name of rapid industrialisation. He argues that because the alliance between the state and the business elite is so narrow, state capture and social resistance are heightened. He concludes that in this environment the state is often characterised by repressive and authoritarian leaders. These leaders use a mixture of ideological mobilisation to win acceptance by the masses and a highly competent bureaucracy to protect it from state capture.

On the other extreme of the continuum is the “neo-patrimonial state”. In this state Kholi describes a state which though it may look modern (and is often organised as a democracy) is backward and corrupt and characterised by public office holders who tend to treat public resources as their personal patrimony. Kholi uses Nigeria as an example. He shows that most neo-patrimonial states are characterised by populations which are fragmented along ethnic, religious or class lines. In this state the government is less likely to pay attention to industrialisation as it rather focuses on trying to accommodate conflicting interest groups.

Most states in the developing world fall somewhere between these two extremes in a category equivalent to Evans’ intermediate state or the generally termed fragile state. In Kholi’s typology these intermediate states are called “fragmented multiclass states” and he believes that they are the best representation of “real modern states”. Unlike neo-patrimonial states, fragmented multi-class states do command authority among their population and there is often a public arena which is sufficiently well established to hold the state accountable for its performance. Fragmented multi-class states differ from cohesive capitalist states importantly in relation to the breadth of the alliances between the state and non-state actors. In this state, the government usually has an alliance with multiple (and often competing) non-state actors including established capitalists, new capitalists and labour. This broader set of alliances means that the state is not in a position to define a narrow and specific goal for the government to pursue. Rather the state needs to keep a host of alliance members happy to maintain its political support. This results in a raft of policy goals. In this situation, rapid industrialisation and economic transformation may be only one goal among many (such as welfare provision and redistribution goals).

In this situation, policy formulation and implementation are often politicised either because of intra-elite conflicts or because state authority does not penetrate deep enough in the society to incorporate the will of the lower classes. Kholi argues that because fragmented multi-class states are spread so thin, and because their alliances do not penetrate deeply, they often encounter opposition and become obsessed with issues of legitimacy, leading them to promise more than they can deliver. Against this background, Kholi argues that attempts to pursue a complex state-led industrial policy will be so fraught with compromise that at best such states will be “middling performers” (Kholi, 2004 p.16) in industrial policy design, implementation and outcomes.

Kholi’s conclusions are uncomfortable for policymakers but depressingly realistic. His work essentially shows that the best options for rapid industrialisation occur in a highly authoritarian state in which the ideology of a strong government and a powerful nation state is emphasised at the expense of citizens who oppose the state’s goals (in this case rapid industrialisation). Kholi concludes that using this analysis, policymakers need to make tough choices between economic development and individual rights, and trade off the wants of the labouring classes with those of the capitalist classes. In the real world, most states are fragmented multi-class states in which the state seeks to meet the demands of multiple stakeholders through multiple (and often competing goals). In this situation, the pursuit of rapid and effective industrialisation will not be compatible with broader social and political empowerment goals and hence such states are doomed to be poor industrial

policy performers. The current heterodox scholars seek to counter this gloomy view with an approach based on designing industrial policies that directly take into account political economy failings and constraints.

MOST CURRENT HETERODOX LITERATURE

The point of departure for current heterodox literature is the uncomfortable reality that once aspects of the state are factored into industrial policy; established economic causal linkages cannot be depended on to provide direction to developing countries seeking to transform their economic structure. Rather the value which IP scholars can now add relates more to issues of institutional design, governance and understanding balance and combining forms of polity and policy. A few common attributes are noted across the current heterodox literature surveyed.

First there appears to be universal acceptance now that once nuanced contextual research gets transformed into simple rules of thumb two things are bound to happen. Research loses relevance and effectiveness and secondly the research develops in “its vulgar form – potentially doing damage when applied to inappropriate circumstances” (Rodrik, 2007 p.12). As such almost all current literature suggests great value in pluralism and in country-specific and time-specific research and analysis.

The second cross-cutting issue is the focus on institutions and their quality. The understanding of institutions is becoming increasingly sophisticated within current IP research and has allowed scholars to play with the idea of designing IP around existing institutional competencies rather than designing a desired industrial policy and then hoping that the country has (or can create) the necessary institutions to support its implementation. Related to institutions is the currently accepted view that path dependence and history matter. This is true since state and institutional arrangements are invariably created well in advance of considerations to transform economic structure. This allows a cross-cutting theme to emerge whereby industrial policy economists are finally able to explain how good politics may in fact be bad economics and where bad politics is often likely to be good economics. But, perhaps the standout feature of the current heterodox IP literature is the idea that IP is in the process of being normalised, by which it is argued that industrial policy become “just another” government policy equivalent of health, education, water, housing or social welfare policy. The concept of policy normalisation captures the idea that just because a policy fails to achieve its intended aims in a given period, this does not mean that the policy should be scrapped. Rather the rational response is to understand why the policy underperformed and to amend it to achieve improved results in the next period. Problems and constraints in this view are not insurmountable but are the everyday content of being in the business of developing and implementing policy. This view allows IP makers and implementers to stop focusing on why IP should exist but rather on how to maximise its impact. Second it urges IP decision-makers and implementers to change what isn’t working as part of a normal course of business and to not make such changes a “big issue”. Finally it supports policymakers to experiment and try new things. Essentially this normalisation fundamentally suggests that IP in the current era is a lot more about process and gradually getting better at things than it is about content specificity¹³ and upfront detailed plan writing.

More specifically – from the foundation work of Mann, Wade, Evans and Kholi – three themes in the current heterodox literature are considered in more depth. They include the latest thinking and

¹³ This idea may seem radical and scary to IP policymakers but the evolution of education or health policy in South Africa since 1994 is an interesting indicator of how normal policymaking is experienced and received.

policy recommendations related to 1) embedded autonomy as it relates to state-business relations and knowledge exchange; 2) discipline and the compatibility between state power and IP instrument usage; and 3) institutions and the capacity and capability of the bureaucracy. All three are highly interconnected and should be read as a unit. In this section the focus is on theory and argument. Specific recommendations and pragmatic interventions are covered in the subsequent section.

The current heterodox IP thinking on embeddedness suggests that in the modern approach there are two modes of carrying out industrial policy. The first is the East Asian approach where the government picks certain sectors and provides incentives to support their growth (the South Korean approach). This approach focuses on policy instruments and sectoral priorities. Rodrik (2008) and others consider an alternative mode which is called the “process mode” of industrial policy. In this approach, industrial policy is seen as a process without a preconceived list of sectors or policy instruments. The emphasis is on “constructing an institutional framework that elicits the problems to be addressed and the remedies to be employed through dialogue and deliberation with the private sector” (Rodrik, 2008 p.24).

Rodrik views the two approaches as competing. A more useful perspective may be to see the “process approach” of IP as an updating of Evans’s embeddedness – an updating which accounts for both the increased complexity of the new global order especially with the identification of specialisation; and the reality that governments and state power in most modern developing countries are fragmented multiclass capitalist states as described by Kholi. As such the IP as a process approach can be read as an application of a South Korean-type IP approach, but taking into account the Chang sentiment quoted earlier, that what needs to be the focus is – “getting IP right in circumstances where the country is run by flawed leaders presiding over politically weak and internally fragmented state institutions”.

The process approach is primarily focused on answering a simple question: how in the modern era is a constrained state best able to discover what type of goods it should specialise in and diversify into. As pointed out in the new global order literature, the existence of India and China as high-volume, low-cost manufactured goods centres, the pattern of production-sharing occurring due to improved sophistication in global value chains, the decreased policy space available to support new infant industries using tariffs, and the increasing blur between final and intermediate goods all suggest that the process by which a developing country figures out what it is it should be producing is becoming increasingly difficult. How did India work out that it could compete in IT, how did Kenya establish that it could compete internationally in the cut flower market, and how come Bangladesh and Pakistan with very similar factor endowments and cost structures specialised in T-shirts and soccer balls respectively? All these choices seem obvious in hindsight; but ex ante few of the advantages were visible. In addition, Hausmann and Rodrik (2002), Baldwin (2011) and Naude (2015) importantly point out that countries do not specialise in “clothing and textiles” or in “beneficiated products” anymore. Rather they specialise in T-shirts or cotton hats, or in aluminium cooking pots or brass fastenings. In the modern era specialisation and international competitiveness are increasingly focused on specific product lines and a narrow range of goods¹⁴. At this more fine-grained level of specialisation identification, discovering what goods a country should produce is increasingly difficult and some argue increasingly random.

The rationale behind the process approach to IP is straightforward. The approach assumes that government has only a vague idea at the outset about whether a set of activities is deserving of

¹⁴ It is suggested that products need to be specified at a 6 digit SIC (Standard Industrial Classification) and 8 digit HS (Harmonized System) level to be relevant for an industrial policy.

support or not, what instruments to use, and what kind of private sector behaviour to condition these instruments on. The information that needs to flow from the private sector to the government to make appropriate decisions on these issues is multidimensional and complex and cannot be communicated transparently through firms' actions alone (i.e. the market). As Rodrik puts it, "a thicker bandwidth is needed" (Rodrik, 2008 p.26). This thicker bandwidth is the construction of a system of "joint discovery" about all sources of uncertainty and constraints markets face, designing the most effective interventions, periodically evaluating the outcomes, and learning from the mistakes being made in the process. The process suggested is a model of strategic collaboration and coordination between the government and the private sector. Essentially this can be understood as a modern-day version of a South Korean type of embeddedness, but for states with less despotic power and lesser capabilities.

Focusing in on the product identification is part of the discovery process. Assume that an individual entrepreneur through self-discovery finds that Good X can be produced at a competitive cost in a particular country. There is great social value in this discovery. The discovery will impact the investment decisions of other entrepreneurs who will crowd into the opportunity and quickly emulate the activities of the initial entrepreneur. The problem is that the initial entrepreneur can capture only a small portion of the social value that the discovery has generated. Consequently, this type of discovery entrepreneurship will typically be undersupplied and economic transformation will be delayed if such discovery is left solely to market forces. In the process approach to IP the identification of Good X would be shared by the discovering entrepreneur with the state. Economic rents would be created to reward the entrepreneur for the discovery and its spillover effects, while simultaneously support measures and other instruments would be designed to address the constraints facing the growth opportunities of the good (e.g. ensuring there are the right inputs and infrastructure). At a more general level, the process approach to IP would be set up so that government rents (through trade protection, temporary monopoly rights, subsidised credit and tax incentives) would stimulate the actual activity of self-discovery by decreasing the cost of the discovery process. This would support the flow of new product and new product line ideas, which if competitive, will contribute to a country's new areas of specialisation and diversification. If the process and institutions in support of self-discovery become systemic, then seamlessly the notion of self-discovery by entrepreneurs would be transformed into a system of joint discovery in which the private sector and the state strategically collaborate in the best interests of growing the economy through identifying and supporting new areas of specialisation and diversification¹⁵.

A huge perceived benefit of this approach is that it negates the need for a capacity-constrained state to pick winners up-front in an IP programme. Essentially the state needs to "encourage entrepreneurship and investment in new activities ex ante, but push out unproductive firms and sectors ex post. This of course is easier said than done" (Hausmann and Rodrik, 2002 p.17). What those supporting the IP as process approach argue is that in their model the state does not need to ex ante figure out who the winners will be. They argue that discoveries which meet the thresholds identified in the institutions and processes of the joint discovery process as worthy of state support should be automatically supported. The state at no point needs to pick winners – the process does this. What the state does need to do, however, is to let losers go. Picking winners and letting losers go are fundamentally different tasks. One is based on predicting a future with no data available to test or reject a hypothesis. Picking winners is an ex ante activity. Dismissing losers on the other hand

¹⁵ This model applies only to new activities and new ideas. It does not account for supporting existing industries and their existing product lines. This obviously raises the issue of what is meant by the term "business" or "private sector".

is based on data and performance – it is an ex post activity. If states focus on being good at getting rid of losers, they do not need to pick winners. The rub lies in how easy or hard it is for a state to let go of losers. Letting losers go in an authoritarian state with high levels of autonomy, a narrow alliance with business and a coherent capitalist system is easy. Letting go in a Kholi-type fragmented multiclass state where state autonomy is limited by the need to meet the broad demands of multiple non-state actors simultaneously is another matter altogether. This issue is dealt with in more detail when the management of economic rents is presented.

Over and above the advantages of the IP process approach in identifying product specialisation and making government decision-making easier and more reliable, other economists also highlight additional efficiencies which can be gained through increased embeddedness. Hisahiro (2005), for example, shows that the involvement of business with the state from the early stages of IP development will decrease future policy uncertainty and thus provide a more predictable investment environment for the private sector. His data illustrates that increased investment rates are found in countries where business-state relations are stronger and where policy uncertainty is decreased due to early information exchange and transparency. Devlin and Moguillansky (2011) argue that good state-business relations allow developing countries to provide high-quality public goods that actually matter to business. The argument is that infrastructure demand will invariably exceed infrastructure supply in developing nations. If businesses can inform government what precisely they need and the quality of infrastructure required, then this will increase the growth impact of infrastructure investment decisions made by the government¹⁶. Finally, Sen and Velde (2007) argue that having business involved in IP preparation provides efficiency gains. The argument is that when government interacts with business organised into some form of association of representative grouping, transaction and co-ordination costs can be minimised.

The IP process argument with its emphasis on embeddedness and knowledge exchange has validity and certainly the randomness of product identification found in the case-study literature¹⁷ suggests that the approach has merit (especially) in the new global environment. The process approach also has merit in that it minimises the need for the state to pick winners ex ante. This is important in developing states, especially those with limited autonomy and capacity and capability constraints. The approach, however, is far from a panacea: two additional issues need to be factored in. The first relates to the relationship between the state and business, and specifically, the ability of the state to discipline business to produce the results the state seeks (letting losers go). The second serious difficulty is how the state can achieve this discipline when it operates with a constrained bureaucracy (institutions).

A distinct feature of the Southeast Asian developmental states such as South Korea is the view that the state could discipline the business community and ensure that firms which benefitted from state protection and largess met their reciprocal obligations in performance standards which had been set for them. The Southeast Asian “miracle” was often ascribed to this ability to manage rents. Likewise,

¹⁶ This is an important point which will be raised in the next section when the idea of second-best institutions and infrastructure which is not world class but meets a current need is considered.

¹⁷ For example, in the 1980s no one would have foreseen that India would become an important global IT player. Looking at the rise of the IT sector, the first IT company in India was a company called Infosystems and Wipro. By the CEO's own admission in a 1999 interview (Nasdaq international Magazine, 1999), they set up the company as an experiment and a lark and never thought it would really succeed. In reality it became the business model and anchor investor in what was to become India's IT hub, Bangalore. A similar story identifies the genesis of Colombia's cut flower industry as being initiated by a retired American who was looking for something to do when he relocated to Colombia to be with his girlfriend.

the failure of many African and Latin American attempts to implement equivalent IP approaches has often been ascribed to a lack of rent-management skills. The general view prior to 2007 was that rent management was predominantly a function of capacity and the capability of the state. It was argued that South Korea was so successful in its IP implementation because it had a highly competent and capable state which was able to discipline the private sector and let losers go. Indeed, in the first 10 years of the Korean IP experiment only three of the 10 initial companies provided with subsidies continued to receive such subsidies in the following 10-year cycle. In a converse situation, it is argued that Brazil was unable to enjoy the benefits of its Korean-type IP experiment because of the state's low capacity and capability to enforce discipline on the private sector. In this view if a country was unable to improve its effective statehood and establish institutionally efficient benchmarks, as suggested by for example the World Bank measurements described earlier in the paper, then such a state should refrain from implementing interventionist IP. A crucial piece of heterodox research by Khan (2009) fundamentally altered this view.

Khan showed that while state capability is a constraint to rent management, political constraint is a bigger and more important constraint. The implication of his work is that a state can be effective in rent management even if it has capability constraints as long as it has developed rent management instruments and systems which are compatible with its internal political configuration. For Khan, the issue is one of compatibility not capacity. He suggests that most commonly, developing countries have come unstuck in IP implementation because they have attempted to copy Southeast Asian approaches which are incompatible with their own power realities.

Khan's thesis starts with the fact that any interventionist IP non-market incentive requires "institutional systems of compulsion to supplement the discipline imposed by the market" (Khan, 2009 p.2). The precise nature of the institutional compulsions required depends on the specific mechanisms through which the state attempts to achieve its goal. As such his analysis applies to any number of IP instruments characterised by incentives and compulsions. His approach also allows for a consideration of any goal or purpose the state may identify and develop industrial policy around (learning, exporting, redistribution).

In effective rent management, a conditional subsidy or rent is provided to a well-defined population for a fixed period, with the condition that the subsidy will be withdrawn at the end of the period or even earlier if performance is poor. In the short run the subsidy or rent constitutes a static inefficiency which would not prevail under market conditions. The short-run cost to the country of the subsidy is only worthwhile if the rent generates long-term benefits consistent with the underlying policy and goals of the state. If the state lacks the credibility or will or power to withdraw a subsidy when there is underperformance there will be the short-run cost, as well as the long-run cost of a failure to reallocate subsidies and assets. Khan argues that for effective rent management to occur the state is required to do two things. First, it must be able to pragmatically monitor and make judgements about performance¹⁸. Second, it must have the capacity to reallocate the subsidies, rents and assets of non-performers. To be able to achieve the latter, he argues, the state requires "*critical political capacities*; in particular, the organisation of power in society must be compatible with the rent management that state institutions are trying to implement. If such compatibility is absent, rent re-allocations are likely to be blocked by groups or factions that would lose out from such re-allocations" (Khan, 2009 p.9). Thinking about this in the context of the different types of states suggested by Evans, Wade and Kholi, it becomes apparent that the types of instruments which would succeed in an authoritarian state with high levels of despotic power would

¹⁸ Khan argues that often this is achieved through trial and error and is not known ex ante.

differ substantially from the type of instruments which would be effective in a Kholi-type fragmented multi-class capitalist system in which multiple groupings of non-state actors interests need to be balanced by the state. Because Khan's analysis is country specific and requires a detailed analysis of the political economy environment within which rent management is undertaken at a particular time, it is difficult to illustrate the massive contribution he has made to current heterodox IP thinking. His policy conclusions for countries which have to date been less than successful in their IP pursuits is telling and speak to the relevance of his work in many developing countries. He urges that the lesson such countries should come away with from his research is "not to abandon all vestiges of their failed policies at the fastest possible rate, but to identify the type of IP that *is* implementable *in their* particular context given critical internal and external political constraints" (Kahn, 2009 p.3). He goes on to suggest that expectation should be muted. "In many cases, the feasible industrial policy may yield less dramatic results than in most of the Asian cases. In others, one must address some of the critical political constraints in order to allow the implementation of *even very limited* industrial policies." (Kahn, 2009 p.3)

The idea that IP should be conceived and formulated in a way that is relevant and appropriate to a country's extant political power balance and institutional capacities and capabilities is enormously useful in a developing country context. But, if a country aspires to altering and improving its institutional capacities and capabilities, and considers possible ideological shifts to improve the growth prospects of the nation, what are the issues and options available?

As mentioned in the introduction – one of the cross-cutting issues across all new heterodox IP thinking is an acceptance of the importance of institutions and more specifically the quality of those institutions. The review begins with a general (non IP specific) discussion of institutions and institutional change before shifting to focus on literature related to the bureaucracy and specifically the role a bureaucracy plays in ensuring that a state is not captured by the interests of non-state actors in the process of IP implementation. Heterodox thinking about institutions and IP has to date been focused on two foundation issues. First, substantial effort has been directed at critiquing the neoclassical approach to institutions¹⁹. Second, substantial effort has gone into understanding the history of institutional development and the creation of accumulation structures and their organisation over the modern life of a state. This second focus is again motivated by an attempt to critique the conservative view of fatalists on the right who believe that developing countries are unable to change their institutions and implement successful IP because of their underlying "culture and value systems". In focusing on these critiques, the field has not yet shifted gear to start adding value to how states seeking to advance institutional change and improvement as a means of improving IP performance could approach such a challenge. Some specific ideas are posited in some current writings but theory development remains frustratingly thin and nascent.

The heterodox critique of the neoclassical, reductionist view of institutions, as exemplified by the GSI Index created by the World Bank, is based on two theoretical problems identified. The first is that the GSI-type approach to institutions assumes that causality runs exclusively from institutions to economic development. Chang (2010) makes a seminal contribution to the debate by suggesting that it is quite possible that economic development drives institutional change. He raises three arguments. First, he suggests that as wealth increases due to growth it is likely that the demand for

¹⁹ This focus has been extremely important to developing countries as multilateral organisations such as the World bank and IMF (and aid agencies and government-to-government donor schemes) have increasingly been tying access to support to institutional improvements as per the World Bank's 16 variable Global Standard Institutions model. Just as these organisations spearheaded the "selling" of the Washington Consensus to the developing world, so they are now peddling GSIs.

higher quality institutions will increase. He suggests as an example that as nations become wealthier they tend to demand that their political institutions become more transparent and more accountable. Second, he argues that institutions are expensive to create and to run and that better institutions are more expensive than worse institutions. As such if the wealth of a nation increases because of growth it will be able to afford better institutions. Finally, Chang argues that economic development creates new agents of change, demanding new institutions. An implied bargain is struck between the state and the upper and middle classes. For example, the industrial revolution led to the creation for the first time of the working class and these newly created agents in society were responsible for the demand for, and ultimate creation of, the first welfare state – an institutional change which would not have occurred in the absence of economic development and increased wealth. Chang’s final point is to consider the chronology of institutional development in advanced economies such as America, France, Germany and Britain. He shows that “today’s rich countries acquired most of the institutions that today’s dominant view considers to be prerequisites of economic development *after*, not before, their economic development – (democracy, modern bureaucracy, intellectual property rights (IPRs), limited liability, bankruptcy law, banking, the central bank and so on” (Chang, 2010 p.476).

The second critique of the traditional view that better institutions are always desirable is that this view fails to appreciate that the relationship between institutions and economic development is not linear, differs across societies, and changes over time in the same society. So, for example, Stiglitz (2007) shows that the institutionalisation of intellectual property rights (IPRs) will motivate firms to invest in knowledge creation and support growth, but too many IPRs will hinder innovation by making technology diffusion too expensive, preventing cross fertilisation of ideas and increasing the chance of deadlock situations caused by IPR disputes. In addition, IPRs may be essential for growth in an advanced economy, but the exact same institution in a developing country may not produce the same growth results because of the lack of entrepreneurs available to benefit from the incentive and protection.

These arguments are important because they suggest that countries blindly following the advice of organisations such as the World Bank to massively invest in improving their institutions might be better served by investing their money elsewhere. Chang’s 2010 viewpoint comes across as extreme. In his other writings (2002; 2008) he supports the idea that improved capacity and capabilities are important and that good quality institutions are desirable and can be useful in IP. The point which is being emphasised here (just like Khan’s point above and even Rodrik’s view) is that the power of better institutions is not a silver bullet for development. Equally, lesser quality institutions are not impossible to work around in an IP setting (although they will be a limiting factor). As such, when to invest in institutional change in support of improved IP results (or for any other reason) should be a considered *choice* on the part of the state. Some sort of cost-benefit-type analysis should be undertaken and an understanding of how difficult it is to complete institutional change must be at the forefront of any champion’s mind. As will be discussed in the following section on practical recommendations, an increasing amount of literature and research is appearing that suggests that second-best institutions are often a better option for developing countries to pursue than GSI benchmarks which reflect advanced-country contexts.

Current heterodox literature emphasises three arguments concerning the degree of difficulty in changing institutions. The first argument motivated by Aoki (2007) is that it is often difficult for a developing country to benefit from institutional change because in most cases change in one institution will only be beneficial if complementary institutions change simultaneously. Unless a critical mass of supporting institutions is correctly identified and installed at the same time, a new

institution may not achieve its desired outcome. The example most often cited is that of changes in land ownership. If land is redistributed but institutions which provide affordable inputs such as credit, infrastructure, fertiliser and skills development are absent then changing the institution of land ownership will not have its desired impact.

Cimoli, Dosi, Nelson and Stiglitz (2009) and others note that the difficulty or ease of changing institutions is also a function of how important the said institution is. They argue that some institutions are deliberately designed and codified, and even contain rules that make changes difficult to effect. Chang agrees with the point and emphasises that “institutions are designed to be stable otherwise they have no use” (Chang, 2010 p.490). Important institutions such as a constitutional court or central bank, by virtue of their importance in society, will have rules and mechanisms built in to protect them from change. There is often an inverse relationship between the importance of an institution and the ease of being able to change it.

Finally, there is the generalised debate about whether developing countries are indeed capable of changing their institutions or if they are just “too corrupt” or “too stupid” to be able to pull off such a change. The root of the argument in IP terms comes from Evans (2005) updated by Chang (2010) and is particularly important in understanding the political economy context in many developing countries and the challenges of changing such contexts.

In its current form, the so-called “constitutive role of institutions” debate was originally raised in the IP context by Evans in his examination of South Korea, but the issue (in various guises) has been a hot bed of disagreement between left and right wing theorists for decades. Conservative theorists and supporters of, say the GSI approach to statehood discussed above, put forward the view that institutions are the product of rational choices by individuals. These rational choices may reflect selfishness, such as the desire to maintain financial or political power, but the point is that the decision-making is rational.

Heterodox thinkers on the other hand see individuals as the product of existing and previous institutions. Existing institutions are turn a mixture of deliberate choices made by agents of yesteryear and the institutions that had existed prior to those agents. This path-dependence argument suggests that the very notion of self-interest or a conceptualisation of rationality must be defined by history. The heterodox argument is complex but important. It is argued that rational decision-making which is non-contextual and an absolute concept doesn’t exist. Rather decision-makers are products of the history of their country as expressed through that country’s institutions and the history of those institutions which result in their current form. As such, different historical paths may lead to different notions of rationality, efficiency and justice. What this means is that a choice to change or not to change an institution may be viewed as a rational decision in one country but as an irrational decision in another. This is not because the individuals are “stupid” or “corrupt” but simply because their institutional histories have influenced their current perceptions at a very fundamental level. This can be referred to as a country’s “tradition” or “culture”.

Naysayers of IP implementation in developing countries, and what Chang refers to as “institutional fatalists” argue that a country’s traditions and cultures are immutable thus irrational decision-making as part of a developing country’s tradition or culture cannot be changed and thus interventionist IP is not an option for such countries and they would be better served by relying on market forces. Heterodox thinkers, on the other hand, believe that tradition and culture can change and that they do so through two important channels.

The first channel through which institutional change can be achieved in a developing country is because of the reverse economic causality suggested by Chang. In this argument, economic development, growth and wealth creation are a driver of institutional change, which in turn results in cultural change. Chang argues that “industrialisation makes people more rational and disciplined” (Chang, 2010 p.492). He uses the history of Germany and Japan to illustrate his point. Chang quotes from the diary of an American missionary Sidney Gulick, who in 1903 visited Japan and described the Japanese as “lazy, irrational and congenitally incapable of dealing with machinery” – a description completely different from their modern racial stereotype. The second channel is through the traditional Marxist view of human agency.

In this argument, human beings are not seen as simply the carriers of tradition and culture; nor contrary to the rational approach of neoclassical economics, are they always driven purely by self-interest and objective economic interests. As argued, ideas and the institutions which embody them influence how people perceive their own interests. Sometimes individuals will assert their human agency and seek to change an institution even if it may not be in their own rational self-interest. Chang and Evans refer to an interesting case in South Korea in 1970 when members of the Economic Planning Board argued for the abolition of their own ministry (against their own self-interest) because they had changed their ideological view on issues. Similarly, Indira Gandhi’s decision to shift India from its post-independence ideological path of socialism to a capitalist system was not in her own (or her party’s) best interests but signalled a change in belief which through human agency resulted in a massive institutional shift. The idea that people matter and that human agency can win out irrespective of tradition, culture and path dependence is important in most modern developing countries wrestling with the challenges of institutional competence. This point has also been highlighted because it will reinforce some of the practical suggestions made in the last section – such as the idea of using islands of excellence to achieve short-term improvements in niche areas of IP.

Turning more specifically to the bureaucracy, it has been argued that the ability of the state to become embedded in the private sector and to secure informational flows between the public and private sector run the risk of the state being captured by the interests of the private sector or a specific group of non-state actors. The literature of Wade, Evan and Kholi clearly demonstrates that the key to ensuring that the state maintains its autonomy, that it can avoid capture, and that it is able to let go of losers, is the appropriate functioning of the bureaucracy. A competent, capable, efficient and effective bureaucracy is viewed as one that can secure the state elite’s autonomy and at all times implement IP decisions which are in the national interest, even if they decrease short-term profits of capitalists or limit some industry players’ access to rents. The traditional definition of a bureaucracy as an institution is typified by a view that “it is a co-ordinated set of operating rules and guidelines whose purpose is to guarantee the continuity, coherence and relevance of public policies and prevent the discretionary exercise of public power. It is the institution in charge of preparing, executing, controlling and evaluating public policies.” (Zuwanic et al, 2010 p.147)

Moving on to describe the characteristics which such an institution needs to include to complete these functions, traditional textbooks suggests that: 1) only an *impartial* and transparent bureaucracy can generate certainty and credibility; 2) a *professional* bureaucracy is needed to limit the adoption of opportunist policies and strengthens confidence in non-state actors; and 3) a *stable* bureaucracy is needed to reinforce intertemporal political agreements and co-operation.

Geddes (1990; 1994), who chronicles the anatomy of the Brazilian bureaucracy since the 1930s, adopts a more historical and political analysis of the characteristics, drivers and actions of a bureaucracy. Her starting point is that state autonomy is viewed as a prerequisite for an isolated and

autonomous bureaucracy. This point has always been agreed on in heterodox economics – an independent bureaucracy that can maintain a state’s autonomy must by definition be autonomous and independent. Geddes raises the point that state autonomy cannot be directly observed or measured. Rather it is inferred and understood after the fact in terms of policy outcomes. When this is added to the argument that the state is not a unitary actor, Geddes raises an important point, – that one must be careful about making broad statements about state autonomy and its implications vis a vis the bureaucracy. So, if a state is described as lacking autonomy or as being captured, – is the reference to the state, the regime, the president, a state elite, the cabinet, the collection of agencies that report to the state, all of the above or other segments and divisions? If one category or segment lacks autonomy does that automatically imply that all divisions or segments lack autonomy and what does this mean for the bureaucracy?

Geddes sees bureaucratic capacity as “operating in a cohesive organisation with the requisite expertise and extractive and coercive ability to carry out decisions based on their preferences” (Geddes, 1994 p.217). This capacity is a function of the character of the organisation, the attributes of the government, the administration of the public service, and the instruments through which officials can manipulate incentives²⁰. Geddes sees the bureaucracy as a machine which combines human inputs and material inputs to accomplish a task. The machine’s ability to get a task done can be undermined in three ways. First, the human inputs may be inadequate (lack of sufficient expertise). Second, material inputs may be inadequate (lack of budget). Third human inputs have free will and agency (argued above by Evans and Chang) and they can opt to behave to the detriment of the agency.

Geddes’s argument is that capacity is improved when insulation is improved. She specifies three areas when insulation contributes to improved implementation by dealing with the inputs to the machinery of the bureaucracy. She does, however, note as an aside that insulation and improved implementation in no way ensures good policy but merely that a policy (good or bad) will be more effectively implemented through an insulated bureaucracy.

The first important type of insulation is to recruit the best people for the job to ensure a concentration of appropriate expertise in bureaucratic agencies. The bureaucracy requires insulation from pressure to provide jobs for support negotiated anywhere in the state. This ensures that the bureaucracy machine has the requisite skills needed to complete its tasks. Second, insulation allows for the concentration of resources to be applied to development goals rather than to family, friends or other influential groupings. This insulation allows the bureaucracy to use funds for their intended purpose and for such funds not to be diverted to interests aligned with political will. Finally, it is argued that insulation is required to allow the bureaucracy to link job security to performance and goal achievement rather than political loyalty. This is a response to the free will about which Geddes is nervous. Her view is that if the bureaucrats are isolated (cut off) from politicians then their orientation will be inward-focused to the agency and its goals. By making advancement a function of achieving agency goals, the bureaucracy can turn free will inward. Geddes’s view is backed up by the work of Evans and Rauch in 1999 who identified meritocratic recruitment, internal promotion and career stability as the three requirements for an effective civil service. It is interesting and important that in neither study were competitive salaries for the bureaucracy seen as important or driving factors.

²⁰ This links back to Khan’s contribution about appropriate instruments in a given institutional and political power setting.

The literature review was unable to unearth any heterodox economic IP thinking in relation to political constraints and changes and their impact on changes in the bureaucracy. Given the direction the research agenda is taking, this topic is sure to receive attention in the future. For now, it is interesting to note that from the case studies it appears as though the state will give the bureaucracy insulation most commonly when it is in the self-interest of the state to have a competent bureaucracy. This will happen, for example, when the state has made substantial delivery promises to multiple non-state actors and feels that its continued power rests with its ability to deliver against these promises. This was certainly the logic which saw the creation of the Indian bureaucracy under Nehru. A second scenario in which insulation is conferred is when there is substantial despotic power, as in South Korea. An insulated bureaucracy is less likely to exist when a state has low despotic power, the leadership feels threatened, and the state believes it can maintain power even if it does not deliver on its promises. Geddes and others have several interesting pragmatic suggestions on how to improve insulation or to work around a lack of insulation in this latter scenario. These are discussed in the following section on pragmatic ideas and case study examples.

PRAGMATIC IDEAS AND CASE STUDY EXAMPLES

This section documents ideas and examples collected during the literature review. In most cases the examples and ideas are based on specific country circumstances at a particular time – an approach favoured by heterodox IP thinkers. As such there is no hint of a suggestion that any of the material is applicable to the domestic extant circumstances facing South Africa. Rather the examples are presented to illustrate in practical terms some of the theoretical and conceptual thinking presented and thereby to assist in the assimilation of the ideas. The examples may also catalyse thinking and imagination; and perhaps influence future (or further) domestic research and application efforts. A few concepts are considered in detail: systemic bureaucratic upgrading versus islands of excellence, second-best institutions, and channels and tools to improve state-business relations and the functioning of a joint discovery process and IP tools.

The literature review clearly establishes the role of the bureaucracy as the check and balance in governments' relations with the private sector. Evans' idea of embedded autonomy clearly shows that a competent, capable, insulated and independent bureaucracy is necessary to ensure that during the process of embedding the state is not captured by private sector rent-seeking or other interests. Despite the level of interest shown by lagging economies to replicate a South Korean-type industrial policy approach few have actually attempted to systemically upgrade their public services in a meaningful way.

The most well documented developing country attempt of systemic upgrading of a bureaucracy can be found in Brazil. The programme lasted an extended 24 years from 1930 to 1951. Tellingly, however, the political regime in place at the time was a dictatorship (Getulio Vargas). As a dictator with absolute despotic power and total autonomy, Vargas announced his plan to upgrade the public service immediately on taking office (1930). He established a new and separate department to implement the reform and the department was a super ministry which had power over all other ministries and was accountable only to the president himself. The department and its strategy was based on three pillars. First, it was acknowledged that the most important element to get right in the reform was to upgrade the skills and competence of Brazil's bureaucrats. A civil service based on merit was sought. This was simply achieved by a civil service examination. Recruitment criteria were reflected in the exam and only those with the highest grades were offered positions. To ensure that the best people in society sat the exam, the department ensured that civil service jobs were viewed

as being high status and they also marketed the idea that such jobs were highly stable and permanent as long as individuals achieved required standards. Over and above a marketing exercise, the “exclusivity” of high-status recruitment was supported by a second pillar – the compartmentalisation of the civil service. This approach essentially called for the creation of a dual, or two-tier civil service, and was necessary because of the skills constraint in the country. As discussed, elite career civil servants were recruited but a lesser type of civil servant was also created. These civil servants were not guaranteed a long-term career but were seen as interim employees or extransumeraries. They did not receive the full protection of civil service laws and benefits, were not paid particularly good wages, and importantly none could advance to the higher echelon without completing the recruitment exam. This allowed the civil service to meet its numerical needs in an environment of skills constraints, but to simultaneously maintain the elitism of the upper echelons of the meritocracy. The third pillar of success in this strategy was, as Geddes observes, the ability of the newly formed department to upgrade its own personnel and to achieve the socialisation of efficiency and public service into a new norm.

The public service administration department, whose job it was to oversee reforming the bureaucracy, invested substantial time and effort in attracting good quality staff and upgrading the skills of its own staff complement. More importantly it “developed sub cultural norms and incentives in the form of promotions and status within the department that would serve to keep the personal goals of employees consistent with the department’s goals” (Geddes, 1990 p.7). It appears that the department had a highly-developed esprit de corps and sense of purpose. It was because of this buy-in within the department that these bureaucrats were able to engender in the departments below them a new tradition, value system and belief system of what it meant to be a public servant, and what level of efficiency was expected from such a servant of the people.

The President gave the successful department more and more tasks and responsibilities. Its power became exceptional. As soon as the President was removed from office, the department was disbanded because of the power it had amassed. The civil service exam was scrapped, as was the compartmentalisation of the civil service. The change in political balance had thus changed the institutions available to implement and support IP.

What followed is particularly interesting not just from a political and institutional change perspective but specifically from an industrial policy perspective. After dismantling the public service reforms the (now democratically elected) Brazilian leadership of the 1960s realised the desperate need for a functional bureaucracy if they were to deliver on their election promises. The post-Vargas²¹ government enjoyed only a narrow majority and the leadership was well aware that they did not have the political power or connections to systemically reform the civil service in the way Vargas had. Instead the leadership began to look for, or create, on an ad hoc basis, isolated agencies or groups of people outside the traditional bureaucracy who would be able to assist them in policy implementation and delivery of election promises. Many of these agencies were small groups inside state-owned enterprises, a few were groups within government departments at national and sub-national level, and some were entirely artificially created on a needs basis. The policy was called “*bolsoes de eficiencia*” which translates into “pockets of excellence” which somehow in the modern literature has been turned into “islands of excellence”.

The islands of excellence concept is a perfect example of Kholi’s idea of balancing instruments with political realities. In Brazil, politicians understood that they lacked the political power and capital to

²¹ Vargas was President twice: first as dictator from 1930 to 1945. After he was overthrown he stood for election and won, serving as president from 1951 to 1954.

systemically upgrade and reform the civil service; rather they sought to focus on what they could do given their political constraints – they identified islands of excellence and provided them with protection and the necessary resources to accomplish the most important tasks of government (as deemed by the political leadership). The defining feature of all these islands of excellence was that they were insulated from the traditional bureaucracy and the legislature, both of which had been captured by private sector interests, were generally corrupt, and generally staffed by individuals not necessarily competent. Ironically this period is viewed by numerous economists as the heyday of Brazilian economic achievement.

Nowhere was the islands-of-excellence approach more successful than in implementing the economic agenda (and industrial policy in particular). In terms of industrial policy, the President of Brazil came up with a list of 30 national economic goals collectively known as the *Plano de Metas* (Plan of Goals). Projects included goals such as increasing: wheat production, installed electricity capacity, the kilometres of paved roads, and the country's petroleum refining capacity²². Each project was run by an executive group. Executive groups were set up by presidential decree and the leaders of each group were appointed directly by the president. Each group was responsible only for a single goal. The executive groups were explicitly designed to circumvent the traditional bureaucracy and to “get the project done”. Each group had complete autonomy with its budget and personnel but they were expected to co-ordinate with other groups when required. Consensus is that these groups achieved 102% effectiveness and success compared to a 32% success and completion rate by the traditional civil service during the same time period (Geddes, 1994 p.17).

The strategy here is interesting in the context of the conclusions Khan and Kholi draw in terms of constrained states being able to implement IP by balancing the power they have with appropriate tools. What the islands-of-excellence example shows is that the majority of the bureaucracy can be allowed to continue on their merry way of cronyism and favours in return for support as a means of maintaining a given power relationship, but that government can still be effective in selected areas. Brazil layered onto an inept, corrupt, captured bureaucracy a thin sheet of specific, well-supported interventions which were in the national interest and not open to capture. The plan was undoubtedly a compromise solution, but it was successful as an IP strategy because it accurately read the balance between its operating environment and the tools and instruments it designed and implemented.

Both the systemic and islands of excellence examples suggest that a dedicated government (or department within a government) can creatively unblock or accommodate political and bureaucratic constraints. The problem, however, is that both options are enormously expensive, and both (but especially the latter) are likely to be effective only in the short run²³.

In a related vein, some heterodox economists' work has led them to reconsider the idea that developing countries necessarily need to incorporate world-standard, first-best institutional options into their operating environment. The second best institution debate is nascent but interesting in the context of the IP topic. The idea of second-best institutions was included in the heterodox

²² Each project had a specific timeframe and the goal was precisely enumerated – increase production by x% in period A and by z% in period B etc.

²³ Despite these shortcomings, both ideas could be viable options in developing countries where the options are to do something (no matter how short-lived) versus doing nothing at all. For example, despite Brazil's executive groups being disbanded when the government changed, many of the IP policies which had been implemented resulted in on-the-ground changes which outlived the executive group and became permanent fixtures in the Brazilian economy. The best example of this would be the creation of Petrobras and BNDES, the Brazilian Development Bank.

debate with neoclassicist IP scholars late in the 1990s when Chang and others were arguing that all developed countries required was “good enough” (Chang, 2002 p.3) institutions, information and capabilities. At the time, however, the argument centred on whether a developing country should have an interventionist IP or not. The current debate, which accepts as given the need for an interventionist IP stance, focuses on a more detailed assessment of what is useful policy advice that can be shared with a politically and capability constrained government seeking to increase the impact of its industrial policy.

Orthodox IP scholars believe that desirable institutions should provide, inter alia: security of property rights, enforceable contracts, support for entrepreneurship, fostering of global integration, and the maintenance of stability. They also subscribe to the World Bank-type GIS view which suggests that all countries should copy such institutions as they exist and operate in advanced countries such as the US or UK (countries with the highest GIS score). There is a built-in bias towards a “best-practice model” in all of this literature.

Rodrik authored a breakthrough paper in 2008 in which he critiqued this first-best mindset claiming that it “presumes that the primary role of institutional arrangements is to minimize transaction costs in the immediately relevant domain – without paying attention to potential interactions with institutional features elsewhere in the system” (Rodrik, 2008 p.2). He went on to argue that “a focus on best-practice institutions not only creates blind spots, leading us to overlook reforms that might achieve the desired ends at lower cost, it can also backfire” (Rodrik, 2008 p.3).

The most illuminating example of the idea of appropriate resource allocation when faced with an institutional shortcoming is found in the work of Fafchamp (2004), McMillan and Woodruff (1999), Dixit (2004) and Rodrik (2008b) in Ghana and Vietnam. The narrative emerging from the work is that although Ghanaian commercial laws and statutes allow for property rights to be protected and contractual disputes resolved by due legal process, in reality the courts are highly inefficient and costly. Survey research shows that fewer than 10% of firms in Ghana would turn to the courts to settle a contractual dispute with a supplier or client. A neoclassical economist looking at such a finding would conclude that a package of judicial reforms aimed at strengthening the capacity, autonomy, efficiency and honesty of the Ghanaian courts would be an essential step in promoting economic growth in the country. They would suggest that such a reform process start to emulate the judicial institutions of highly rated GIS country examples. Heterodox scholars looking at the Ghanaian problem, however, also viewed research coming out of Vietnam, a country with almost identical judicial and contract-enforcement shortcomings. In Vietnam, something called “relational contracting” was evident. Woodruff observed that firms operating in Vietnam had little confidence in the country’s courts and almost never resorted to them in supplier and client disputes. Instead firms relied on relational contracting with firms invested heavily in building long-term relationships based on trust, demanded immediate payment for goods and services, carefully screened firms before contracting with them, and proactively renegotiated contracts as soon as warning signs of impending problems appeared. By using these alternative arrangements, local and foreign firms managed to transact in Vietnam and supported surprisingly high growth rates (so far) in a consistent manner. This suggested to all the authors that informal substitutes to the formal contracting system actually worked and a rush by Vietnam to invest the time and money reforming its legal institutions might not be justified. Rodrik takes this thinking a step further and suggests that “perhaps it is more effective to enhance relational contracting – for example by improving information-gathering and dissemination about the reputations of firms – than to invest in first-class legal institutions” (Rodrik, 2008 p.5). Further he suggests that considering this evidence, Vietnam could also reasonably argue that it would reform its judicial system incrementally and would prioritise sectors or firms

where relational contracting is especially difficult and only gradually over time work towards a complete overhaul.

Best-practice institutions are by definition non-contextual. The heterodox literature surveyed is emphatic about the importance of context and its impact on IP design and implementation. Both the substitution and the incremental implementation options above provide developing countries with institutional solutions to problems which may be more appropriate to a country's capacity, capability, political realities and financial constraints at a particular time in history than first-best solutions. Developing countries tend to operate in second-best environments hence second-best solutions may be more appropriate. In addition, second-best institutional options will often offer options to remove constraints which are more politically palatable and implementable than first-best solutions. The consensus view which emerges is that a developing country will usually be better served by employing second-best instruments efficiently than first-best instruments badly.

Finally, current heterodox literature identifies a host of suggestions and ideas that pertain to improving the relationship between the state and business, and improving the design of IP instruments and processes which will occur at the intersection of these two parties' interactions.

Starting with improvements to the relationship between the state and business, it is necessary to consider a severely under-researched area of current heterodox literature.. Technically the area can be subsumed and covered in the historical political economy approach suggested in the reviewed literature but given the sensitivity and complexity of the issue and the difficulty in resolving it, it is suggested that more direct research would be useful. The issue relates to how business and government feel about each other²⁴.

State-business relationships

Most current heterodox literature deals with the thorny issue of government business relations by explaining path-dependent relationship dynamics. In this view current relations are manifestations of historical relations accrued over decades (post independence) if not centuries (colonialism). When the literature attempts to deal with the issue more pragmatically and at more of an institutional level some authors blithely suggest that where trust is low it should be improved – an idea which is not particularly useful unless it is accompanied by indicators of how such a transition can be accomplished.

Harriss (2006) is one author who deals with the subject briefly but offers no recommendations or useful suggestions on how to create trust where none exists. He talks about a “benign collaboration” between the government and the business elite versus a “non benign” relationship. For the relationship to be benign, he argues, three characteristics must be present: 1) *transparency* which facilitates the flow of accurate and reliable information in both directions; 2) *reciprocity* which occurs when the state can secure improved performance from firms in return for subsidies (support); and 3) *credibility* which allows business to believe what the government is saying and therefore to respond to changes and be flexible without undermining the relationship. Harriss argues that these three characteristics are the ingredients of “trust” and that a benign collaboration can only exist where trust exists. Harriss suggests (without going into detail) that the institutional

²⁴ It is unfortunate that this paper was unable to directly deal with the issue of who in the business community the state should work with. Heterodox scholars differ and show that IP can be designed to support any combination of different businesses, for example: indigenous businesses, foreign businesses, small businesses, large businesses, infant capitalists, established capitalists, entrepreneurs making new products and undertaking new activities, and entrepreneurs upgrading existing technologies and processes. Dealing with this material was too large a task to be incorporated in this paper but could be a topic for future research.

conditions which impact whether trust exists or not (and whether it can be created or not) is substantially dependant on the embedded autonomy of the state, and how business is organised.

Harriss argues that the size, financing and diversification of individual firms determine how business is organised. This organisation, he goes on to argue, determines the “capacity of business for collective action” (Harriss, 2006 p.2) and hence the ability and willingness of business to collaborate in a benign manner with the state. A conclusion Harriss arrives at which is supported by Bush (1945) and Romer (1993) is that benign collaboration is far easier to achieve when the private sector is highly competitive. When the business community is highly concentrated and where monopolies are present benign collaboration is considerably harder to achieve and maintain due to the way in which business is organised and the consequent power relations which will impact all three elements that comprise trust. The research was unable to unearth any meaningful suggestions as to how to create trust when it is absent, bar a single (not very useful) suggestion by Rodrik that if a non-benign situation occurs the state needs “to signal its change in attitude”. He goes on to suggest that “if entrepreneurs and investors are led to believe that they are now faced with a government that is willing to give them an ear and help finding solutions to their problems, the benefits can be larger than any specific program of support” (Rodrik, 2008 p.20).

The focus of the current literature, instead of dealing with the issues of trust and benign collaboration above head on, deals with it through instrument and institutional design. In this area, there is no shortage of ideas. First there is a list of possible mechanisms which are suggested as institutional arrangements which will aid the collaboration between business and the state. This includes: deliberation councils, supplier development forums, search networks, investment advisory councils, sector round-tables, public-private venture funds and contests. The contest idea pits private sector companies against each other to win access to public sector resources. Related to this competition idea, but far more complex is Dixit’s (2004) self-enforcing governance and Romer’s (1993) suggestion of self-organising industry boards²⁵. The idea is based on the notion that using market forces to discipline firms is easier for governments than having to impose this discipline themselves (a point especially relevant in a country where autonomy of the state is constrained). Romer suggests that firms in a given sector or industry organise themselves into some form that allows for collective action. This organisation can then approach the state and argue for state support for a well-defined industry programme which will have national benefits and generate positive externalities.

If the state is swayed by the argument, the state would then levy a tax on the sale of the industry’s products. This tax would be used to fund the project. Where the idea becomes highly inventive is that Romer suggests that this pool of funds is annually made available to the industry organisation. Individual firms in the industry can then put forward ideas of how they think the project outcome agreed with government can best be achieved and they put forward a project proposal. Industry members then vote annually to divide the funds raised by the levy to individual firm initiatives. Initiatives which fail to deliver results will fail to receive funds and fall by the wayside while those projects that do make inroads into achieving the goal will receive increasing shares of the funding. The industry thus polices itself and disciplines the beneficiaries of public monies without the government needing to be involved. One of the benefits of the approach is that it allows for multiple approaches to achieve a single outcome simultaneously. For example, the industry aim may be to increase exports and for this they need to improve human capital and skills, undertake R&D to

²⁵ The idea has many applications (such as for National System of Innovation activities, but it is only an option in sectors which are competitive, i.e. not in monopoly or duopoly sectors).

improve process efficiency, and decrease key input prices. All three can be undertaken by different players in the industry simultaneously, ensuring co-ordination and achieving critical mass at all points along the chain required to deliver the required outcome. This is a slightly difficult suggestion for a developmental state, as it essentially privatises industrial policy delivery. However, in the type of situation described by Kholi where state autonomy and capacity is severely compromised and constrained it may be effective.

Another systemic suggestion relates to accountability and responsibility. The literature reviewed placed great emphasis on the role of the bureaucracy in monitoring business and ensuring the autonomy of the state. The literature is largely silent on who monitors the bureaucrats in a non-authoritarian state or non-dictatorship. The ultimate principle is that in a democratic state industrial policy is for, and must be responsive to, the public (in all but a predatory or neo-patrimonial state). For this to have any meaning, IP in a country must be able to give “an account of itself” and its decision-making, implementation and impact to the nation. Multiple authors including Hausmann (2004), Rodrik (2007), Harriss (2006), Kholi (2006), Evans (1995) and Geddes (1996) note that IP takes place in many parts of the public sector (departments, agencies, state-owned enterprises, central bank) and in many places outside the public sector (including the private sector, non-governmental organisations, development finance institutions, and donor organisations). This leads to operational and co-ordination difficulties which make implementing IP highly complex, but more importantly it allows a national IP programme to be “headless” with no single individual in the state taking responsibility for the success or failure of the programme²⁶. Several authors in the literature suggest the benefit of a high level, politically powerful champion to take responsibility for IP and to be accountable for the programme. The idea of an “Industrial Policy Tsar” other than a President does not, however, appear to have been attempted to date in any of the developing-country case studies reviewed. Nevertheless, it may be an idea with some merit in some specific political economy contexts.

Turning more specifically to current recommendations and thinking on actual IP implementation and design in developing countries with political and capacity constraints, several cross-cutting recommendations are made by most authors included in the literature review.

The first point raised in relation to IP instruments and tools is that the only activities which should be subsidised under an IP scheme are those that provide positive spillover effects for society. If there are no positive externalities for the nation, then the activity should not be subsidised. Second there is unanimous consensus that each party to an IP instrument must know *ex ante* and in clear terms what they are signing up for and what will be expected from them in return. Firms must know upfront what their deliverables will be, how they will be measured, and when they will be measured. Firms also need to know upfront the implications of non-compliance. Similarly, government must understand what it must bring to the party if it is agreeing to any terms over and above the subsidy (for example the state may agree to provide tariff protection or keep the exchange rate undervalued) and firms will make decisions based on this undertaking. Developing these criteria explicitly upfront is crucial to avoid projects and programmes scaling down during the review period. Finally, there is consensus that it is better to design IP instruments which have an automatic expiry clause rather than those with a review at a future date to determine whether they are extended or not. The argument is that it is easier, clearer and less open to debate and abuse when an expiry date

²⁶ For example a trade and industry minister could claim that the decisions of the central bank undermined the policy or that the tertiary education system did not provide the necessary skills, hence that minister cannot be held accountable for the failure of the IP programme.

is established in all parties' minds upfront, than in a scenario in which firms think they might be able to wangle a few more years out of the government when the review period comes around. An associated idea, but one on which there is no consensus, is bringing market discipline to bear on IP incentive programmes wherever possible. The argument is that when the government is forced to discipline or assess firms the risk of debate, influence, capture and interpretation may always be an issue. If, however, an incentive is based on market indicators there is a far smaller probability that problems will arise. This was seen for example in South Korea where subsidies were tied to export performance. Unproductive firms failed to increase their exports because the market determined that their outputs were not competitive. These low export figures were then a non-debatable method for the South Korean government to determine the success of the firm's productivity enhancements and its worthiness to receive subsidisation from the state. All these suggestions appear practical and limit the scope for abuse in states with bureaucratic and political constraints.

A second theme where consensus is increasingly being observed relates to balancing political constraints with instruments adopted Kholi (2006), Khan (2009) and the placement and extent of IP programming Kholi (2006) , Khan (2009), Rodrik (2008), Romer (1993), Dixit (2004), and Geddes (1999). The message here is sobering for developing nations seeking to implement broad interventionist industrial policies similar to those implemented in South Korea, Taiwan or Malaysia. The literature illustrates the argument about why governments need to understand their political economy constraints and the balance of power that exists at a given time in their country and to develop industrial policy measures which reflect, and are aware of, that power. Kholi and Khan's work clearly shows that in pursuit of this balance, the aspirations of developing countries may need to be substantially downgraded and that given their constraints, they are likely to be at best "middling performers in IP" and at worst minimal providers of IP. In the current era, heterodox IP scholars are therefore increasingly agreeing that the authority and mandate for carrying out IP activities must be vested only in agencies, departments, parts of departments or groupings with demonstrated competence. This translates into an increasing buy-in to the idea of islands of excellence despite their inherent weakness in the long run. One of the reasons this approach can be supported is Chang's idea of causality running from growth to institutions instead of the other way round. Heterodox economists can justify the use of islands of excellence since if these islands using appropriate tools can improve growth, then this growth will in turn support the improvement in the quality of institutions. This will in turn allow for more IP to be undertaken and the range of tools to be employed expanded. Despite the potential medium to long-term upside potential offered by Chang, the reality remains that the overall heterodox recommendation is converging on the idea that the location of competence may predetermine the IP tools which can be used and the extent of IP programming. All authors agree that this is a real compromise but a necessary one.

CONCLUDING REMARKS

By its very nature heterodox economics, while putting forward an alternative to the orthodoxy, embraces a wide range of views spanning a continuum of ideologies ranging from right to left wing political economy extremes. In the industrial policy era of the 1970s to 1990s, when the very existence of industrial policy and the right of lagging economies to implement interventionist industrial policies was the topic of debate, the heterodox political economy position was considerably more uniform and amassed towards the left-wing end of the heterodox continuum. In this era, there was a clear common position to fight against. Now that the IP debate has moved beyond the discussion of whether it should be undertaken or not (and even has support in various

forms from orthodox institutions and economists) but rather how to best implement it, the landscape is considerably more fuzzy and heterodox views are less ideologically concentrated.

As mentioned at the outset of this paper, the aim of the research effort is to provide useful knowledge to current policy makers operating in second-best (and sometimes third or fourth-best) environments. Within these parameters, it became increasingly obvious as in Kholi, Khan, Wade and Evans that not all heterodox scholarly IP approaches, tools, programming and theory would be applicable in these constrained political economy and institutionally weak environments. By focusing on those heterodox writers who offered what was perceived to be the most pragmatic and implementable ideas and suggestions, the research has found itself covering heterodox thinking across the political economy spectrum, but with a substantial portion of that thinking veering more towards the traditional, orthodox, market-orientated right end of the continuum than the traditional left. This is largely a function of the problem and parameters which frame the issue under consideration (getting IP right in an environment in which there is a lack of state autonomy, a lack of embeddedness, and the lack of a strong bureaucracy); and partly a function of the more eclectic freedom which many heterodox scholars now feel able to embrace.

It was also mentioned that the normalisation of the IP debate presented heterodox IP scholars with a raft of challenges in their theorising and parameters of what impacts IP design, implementation and effectiveness. At the same time, it was mentioned that new heterodox thinking would similarly force policymakers out of their traditional comfort and safety zones and make them engage with problem definitions, policy choices and policy instruments which would in some cases be frightening, threatening or even anathema to their fundamental view of the economy and the role of the state. Ideas such as a constrained state needing to scale down its ambition in terms of IP are not easy for policymakers to take on board. The notion that bureaucratic competence and where it resides in the state may ultimately influence what IP policies and tools a state can effectively rely on may leave policymakers feeling as if they are no longer masters of their own destiny.

Finally, the idea that IP may need to be viewed as a strategic collaboration with the private sector and no longer an activity which the state can deploy on a nation may leave policymakers feeling compromised or disempowered. Feelings of discomfort are to be expected as these new ideas are grappled with. This paper aims to provide knowledge and catalyse thought. It offers no recommendations or suggestions that any idea, project, component or logic be taken forward in any manner – it is simply a collection of views on IP and how it may function in developing countries.

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