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# **Responding to Shocks: Australia's Institutions and Policies**

Ian W. McLean



# RESPONDING TO SHOCKS: AUSTRALIA'S INSTITUTIONS AND POLICIES<sup>1</sup>

Ian W. McLean

*School of Economics, University of Adelaide*

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*Much of the study of economic growth has to be about the structure of models, so that we understand the mechanics of growth and the proximate causes of income differences. But part of this broad study must also confront the fundamental causes of economic growth, which relate to policies, institutions, and other factors that lead to different investment, accumulation, and other decisions. (Acemoglu 2009, p.140.)*

## **1. Introduction (or ‘Never Let a Good Crisis Go to Waste’).**

The current economic crisis has taught another generation of Australians that their economy remains vulnerable to negative external shocks, as it has been since the depression of the early 1840s. So it is unsurprising that shocks and crises figure prominently in the economic history literature, with most attention given the depressions of the 1890s and 1930s. Less attention has been given to other negative shocks, or to a comparative treatment of shocks. In particular, the implications for long-run prosperity resulting from the policy responses to shocks have not received the scrutiny given their short run consequences.

That policy shifts induced by a crisis can have long-run effects on growth is illustrated by recent experience. The policy ‘reforms’ of the 1980s were largely a response to the negative shocks of the 1970s, but introduced also in the belief that growth in the longer run would be enhanced. Indeed, the ensuing period of prosperity (1991-2008) has been adduced in support of the success of the earlier policy changes. An additional feature of the policy reforms of the 1980s is that they were accompanied by – or required – significant changes to some of the key institutional arrangements within which the economy functioned. This close association between policy shifts and changes to institutions in response to a major economic shock may be observed also in earlier periods in Australian history. The joint attention given in this paper to major institutional and policy changes thus derives from the difficulty

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encountered in clearly separating them, whether in their timing, in the motivation behind them, or with respect to their effects on growth.

It is suggested that major shocks have been a principal source of those changes in institutional arrangements and policies of most relevance to long-run growth since the late nineteenth century. Of course, incremental institutional change and adjustments to policy settings are continuous. But Australian experience may be better characterised as one in which periods of relatively modest change are punctuated by negative shocks which lead to a clustering of more significant changes.

The institutional and policy changes discussed will not occasion surprise – they are those accorded most attention in historical accounts of the determinants of the economy's performance. However I question the prominence given in the literature to the 1890s depression as a watershed event significantly determining the course of institutional and policy changes until the 1970s. Rather, attention is drawn to the significance of major *intervening* shocks and the responses to them. For example, the responses to the two wars, to unfavourable conditions in the world economy in the 1920s, and to the depression of the 1930s are here seen as largely independent events, not simply a sequence of predictable choices reinforcing and refining a pre-determined institutional and policy regime (or growth strategy) which had emerged in the aftermath of the 1890s depression. This alternative perspective seems consistent with the timing of key institutional and policy changes, especially where emphasis is given to their economic impact rather than the dates of landmark pieces of legislation.<sup>2</sup> It also appears to accord better with the evidence when attempting to identify the effects of the institutional and policy changes on long-run growth and prosperity.

This is a brief and speculative excursion into a large topic, leaving key questions unexamined. In any attempt to account more fully for particular responses to major shocks it would be necessary to consider the roles of expectations, social norms, and the state of economic theory, as well as the political context. A more thorough inquiry into the Australian historical experience would also better identify the mechanisms linking shocks with policy

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<sup>2</sup> The latter are, perhaps, of greater relevance in political histories, or in accounts of the internal evolution of the institutions themselves.

responses and institutional change. And more attention would be accorded the responses to positive shocks, whereas negative shocks dominate the discussion here.

## 2. Literature.

In recent years economists have assigned greater prominence to institutions in their explanations for why some countries are rich and others poor.<sup>3</sup> In part this reflects the search for a ‘deeper’ or more ‘fundamental’ explanation for growth than that obtainable if attention is confined to the ‘proximate’ influences identified as relevant by most (parsimonious) theories of growth, such as those emphasising the roles of physical and human capital. In addition, regression analyses of newly-available cross-country data-sets have highlighted many *correlates* of growth not previously given attention in growth models, including a number of proxy measures for institutions, stimulating in turn fresh questions about the *causal* relationships at work.

In the analysis of the role of institutions in growth, one question attracting considerable attention is the extent to which some institutions exhibit persistence over very long periods. If institutions both matter for growth and are persistent, then the explanation of why economies acquire growth-enhancing as against growth-retarding institutions may lead far back into their history.<sup>4</sup> In the most prominent of the attempts to link the variation in current levels of economic prosperity across countries with institutional determinants, the historical experience of ex-colonies of the European imperial powers has been scrutinised. Acemoglu, Johnson and Robinson (2001, 2002) argue that some key features associated with the initial occupation of an economy by the Europeans led to differences in the institutional legacy of colonialism and, in turn, the differences currently observed in their per capita income levels.<sup>5</sup> These foundational institutional arrangements thus exhibit remarkable persistence in their influence on economic performance after a century or more, lending

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<sup>3</sup> For a detailed survey of a large literature, see Acemoglu, Johnson and Robinson (2005).

<sup>4</sup> To illustrate, the choice between a civil law and a common law form of the legal system tends to be persistent, in some cases over centuries. For a survey of the economic effects, see La Porta et al (2008).

<sup>5</sup> It should be noted that the empirical base on which this finding rests has been subject to detailed critique, to the point that claimed improvements to it weaken or eliminate the significance of the estimated relationships (Albouy 2008).

importance both to the role of historical influences in accounting for differential income levels today, and to the question of how the choices between alternative institutions were made.

But not all institutions exhibit such persistence. Many undergo change (modification, adaptation) of greater or lesser moment. Some disappear. And from time to time there are institutional innovations. To cite a local example from the constitutional sphere, yet one having obvious economic implications, New South Wales began the European phase of its history (in 1788) as a British military enterprise, but evolved into an autocracy under the formal rule of the British, then (between the 1820s and 1840s) acquired some elements of representative government and democracy, later (in the 1850s) securing responsible government and substantial independence from the imperial government, before federating (in 1901) with other colonies under a constitution that contained elements of both the British and American models. In such circumstances it is not sufficient to posit a set of initial conditions that determine the institutional context which is then locked in. Economists have therefore begun to explore more closely both the sources of institutional change and how they relate to growth.<sup>6</sup>

The term ‘institution’ is not always consistently applied in this literature. In different contexts it may refer to political arrangements, constitutional designs, product and factor market structures, the legal system, organisational forms at a micro level, and more. Hence what should be classified as an institutional feature of an economy rather than something closely related is not always clear. One issue is whether informal ‘rules’ or social norms are part of those institutional ‘arrangements’ which are critical to growth outcomes.<sup>7</sup> Another, of particular relevance to this paper, is the blurred boundary existing between (some) institutions and (some) policies. A strict separation of the two may not always be possible, especially when considering their impact on growth over the long run. I hope to minimise these problems of classification by employing conventional usage depending on the context or specific case: hence the choice of sub-title.

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<sup>6</sup> One assessment is that “despite important theoretical advances, we still lack an organizational framework to analyze the determinants of institutions” (Acemoglu 2006, p.1). See also Acemoglu and Johnson (2005).

<sup>7</sup> Tabellini (2008) provides a recent survey.

A separate literature examines the role played by differences in policy responses to shocks in the explanation of comparative growth. Some countries appear to be better able than others to recover from major negative economic shocks, or to leverage faster growth from a positive shock. And where a shock simultaneously impacts many countries (such as in a world depression), or where the shock has similar features (as with a debt crisis, or a sudden shift in the terms of trade), something of a natural experiment occurs.<sup>8</sup> It is one thing to note these differences, and attribute the subsequent variation in growth rates to the differential policy responses to the common shock, but what explains the different responses? One view is that the quality of institutions of conflict management are critical in determining whether or not a negative external shock engenders serious social conflict thus inhibiting the adoption of appropriate policy responses. However, in Australia, unlike in many developing economies, such institutions have long existed: an independent judiciary, a free press, a democratic form of governance, and so on. Another view is that the ‘resilience’ or ‘flexibility’ of an economy (and society) in responding to a major negative shock hinges crucially on social norms and the cultural context.<sup>9</sup> Again, in the case of Australia these may have been relatively favourable from the outset and not have changed greatly over time. Regrettably absent from these cross-country explorations of the consequences for growth of the policy responses to shocks is a clear delineation of the mechanisms at work.

Before drawing on suggestions in this growth literature to review aspects of the Australian experience since the 1890s, it is necessary to summarise what appears a widely accepted interpretation of the growth strategies which were adopted. What may be designated the ‘conventional’ view is that the history of development policies since the nineteenth century, and the key institutional arrangements associated with them, falls into three phases. We might label these as three successive institutional and policy ‘regimes’ aimed at promoting long-run growth. In the first, running to the 1890s, the economy was extremely open to labour and capital inflows as well as to trade, and subject to only modest levels of domestic market regulation. But governments played a prominent role in promoting economic growth by assisting immigration, borrowing in London to finance infrastructure,

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<sup>8</sup> Recent contributions along these lines are to be found in Easterly et al (1993), Rodrik (1999, 2007), and Edwards (2007).

<sup>9</sup> Tabellini (2008) addresses this nexus.

and encouraging rural settlement and the expansion of the export-oriented rural industries in recognition of their vital role in the economic prosperity of the times.

The multiple crises of the 1890s brought this first phase to an end. Indeed the shocks resulting from a domestic financial crisis, a foreign debt crisis, asset price declines, and persisting serious drought all combined, in this view, to lay the foundations for a long period in which the growth strategy was fundamentally different, and major new institutions were created. Federation was the most obvious institutional response, and there followed quickly the implementation of new restrictions on immigration, the first federal hike in the tariff, and the first decisions in the federal sphere towards a more regulated labour market. These moves were related, and dubbed the ‘new protection’ or more recently the ‘Australian settlement’. Together they formed the (coherent, consistent) development strategy whose essentials were not to change for about 70 years. In this view of institutional and policy history (at least as it relates to long-run growth), the strategy subsequently was extended or reinforced but not fundamentally departed from. But as a result of the adoption of this inward-oriented and relatively highly regulated regime, growth was retarded, an outcome increasingly recognised in the post-war decades.

In this interpretation the negative impact of the economic shocks of the 1970s demonstrated that a ‘wrong turn’ had been taken at the beginning of the century. The reversal in growth strategy in the 1980s included de-regulation in banking and transportation, privatisation of government enterprises, lowering of tariff levels, entry of foreign retail banks, and the floating of the exchange rate. Later there followed taxation reforms and a partial de-regulation of the labour market. The economy became, once again, outward oriented and less tightly regulated, thus entering the third act in this 150-year long drama.<sup>10</sup>

It is suggested here that this interpretation warrants reconsideration; that the consequences for growth of the policy responses and institutional changes arising from the crisis of the 1890s have been overstated; that there were recurring short periods throughout the 20<sup>th</sup> century of concentrated institutional and policy changes of comparable or even greater importance to growth than those at the turn of the century; and that these changes in

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<sup>10</sup> Aspects of this ‘conventional’ view are to be found in many sources – including some of my own work! Kelly (1992, pp.1-16 and 660-686) offers a journalist’s overview that has been widely cited.

the institutional and policy regimes were the result of a succession of (mainly) negative shocks beginning with the First World War.

**3. Nineteenth Century Background.** To fully account for the role of institutions in Australia's long-run growth, it is important to recall that the institutional changes during the 20<sup>th</sup> century occurred alongside other persisting (foundation) institutions dating from the 19<sup>th</sup> century such as language, the legal system, and constitutional and political arrangements (culminating in Federation). These institutions were either imported then subject to local adaptation, or were local innovations. Indeed there has perhaps been rather more persistence in these 'deep' institutional arrangements than in other settler economies. For example, there was no challenge to the national language policy (unlike Canada), no disruptions to continuous constitutional rule (as in Argentina), no civil war (as in the United States), and the colonies were not abolished (as occurred with New Zealand's provincial governments) but became states in a federal system.

I have elsewhere explored the role of initial endowments in accounting for the emergence of some foundational institutions (McLean 2007b), as these exogenous conditions have been assigned a pivotal role in an influential comparative analysis of long-run economic performance in the Americas.<sup>11</sup> However, there is no evidence in the history of the Australian colonies that early institutional lock-in resulted from the set of endowments at the time of European settlement. Rather, there appears to have been a more complex interplay between these conditions and the major actors in the early phases of institution-making.<sup>12</sup> And, unlike the standard political economy model where a property owning elite is pitted against a large property-less class, the direction of institutional innovation in the Australian colonies was also heavily influenced by a third actor, the British government (or the Governor, or colonial office officials).<sup>13</sup> Far from observing rigidity in the early political and economic institutions (as is frequently claimed to be the case in Argentina, for example), the Australians ended convict transportation and the importation of indentured Melanesian labour, gradually wound

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<sup>11</sup> For example, Engerman and Sokoloff (1997), and Sokoloff and Engerman (2000).

<sup>12</sup> Excellent recent political and constitutional histories are provided by Hirst (1988) and Cochrane (2006).

<sup>13</sup> A comprehensive exploration of these models, and their application to comparative history, are to be found in Acemoglu and Robinson (2006).



back the political power of the squatter class, and re-allocated (at least a portion of) the public lands initially granted in large holdings to relatively few occupiers.

In addition, the Australian literature contains many examples of the economic analysis of other 19<sup>th</sup> century institutional changes relevant to the explanation of growth in the colonies. These include such diverse topics as adaptation within the early legal system, the institutional innovation known as the stock and station agency system, the evolution of property rights in alluvial gold mining, and the establishment of public sector agricultural research and education institutions.<sup>14</sup> These were parts of a continuously evolving institutional framework within which Australian growth was sustained across many decades, a golden era that was also remarkably free of major negative shocks.

#### **4. Institutional and Policy Responses to Shocks: An Analytical Narrative:**

For the present exercise it is important to identify any lag between the conventional dating of an institutional or policy change on the one hand, and on the other the time when it gets implemented (modified, expanded, etc) such as to have an effect on growth. In this regard it may be helpful to note some similarities with the economic analysis of technological change. Invention, innovation, and diffusion (adoption) are the stages conventionally distinguished in the development of a new process or product. Historians of science and technology emphasise invention – the discovery date, or date of a patent or crucial experiment. But its economic significance begins only at the time of its first commercial application and depends on the rate (and extent) of its subsequent diffusion. An analogous situation arises with institutional changes. To frame their story, historians tend to focus on key dates, such as when the first (or a benchmark) piece of legislation in a given area was enacted, and this status frequently is assigned from a political or constitutional perspective. Federation has a precise date, but when does this institutional change have a significant impact on the economy? Immigration restrictions are introduced in an act of the Commonwealth parliament, but when do they significantly impact the level or composition of Australia's immigration? Tariff schedules are altered at various times that are clearly identified, but their economic impact may be long delayed or offset by other factors. If all institutional and policy changes had immediate and full impact from the date of their enactment, and were never subsequently modified or adapted, this issue would not arise. But this is likely to be as

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<sup>14</sup> The references are, respectively, to Khan (1999), Ville (2000), La Croix (1992), and McLean (1982).

rare as is the case of new knowledge or technology being fully diffused in the marketplace without any lag following its invention or discovery. And closer inspection of the record suggests that, as in the case of technological change, the most significant institutional and policy changes from an economic perspective often occur as later modifications or adaptations to the original or landmark legislation, regulation, or policy announcement.

As noted, there exists a considerable measure of agreement as to which broad institutional and policy changes since the 1890s have had the greatest impact on Australian growth. These are Federation and changes directly flowing from it (such as federal-state financial arrangements and the expansion of the role in the economy of the federal government), those relating to the labour market (including immigration), and those relating to external trade policy (especially tariff protection of manufacturing). Since the aim in this paper is to suggest a reconsideration of the role of shocks in accounting for the origin (and hence growth effects) of only the major changes in institutional arrangements, or the most significant of the shifts in the direction of policies bearing on long-run growth, the selection is intended to be illustrative not comprehensive. Thus other important changes to the institutional framework within which the Australian economy operated will largely be ignored, such as those relating to capital markets (including the central bank) and other key domestic industries and markets (agriculture, transport, etc.). For similar reasons, and because the focus here is on the long run, I ignore those shifts in macroeconomic policies having primarily a short-run focus and effects.

**The 1890s depression:** The severity and duration of the economic depression of the 1890s, which was comparable in both dimensions to the depression of the 1930s, led either directly or indirectly to major changes in some institutions and policies as well as to expectations and social norms. The principal institutional and policy changes listed in the standard accounts as responses to the depression are Federation and some key legislative landmarks during the early federal period. These include the restrictions on immigration (aimed partly at Melanesian labour); the establishment of new federal industrial relations institutions and their early decisions (Harvester); and the harmonisation of tariff levels which accompanied Federation together with their increase in 1908 (the Lyne tariff).

It is likely that the short and medium term effects on economic prosperity of all these changes were slight. This includes any effects of the introduction of a common external tariff

at a rate above that applying in some of the colonies (Forster 1977). The most recent estimates of the average rates of tariff protection do not show any increase during this period (Lloyd 2008). In the labour market, important institutional innovations were made in the area of industrial dispute resolution and key decisions regarding minimum wages were announced within the new regulatory regime. Most intensively examined has been the Harvester judgement of 1907, attaining considerable status in the history of industrial relations and wage determination in Australia. Yet there appears to be no evidence that these institutional and policy changes had a measurable effect on the operation of the wider economy prior to the war.<sup>15</sup>

It is more difficult to assess the economic significance of any changes following the 1890s in social norms (including of fairness) or expectations (including of government in providing welfare and economic ‘security’ or stabilisation). Yet these are close relatives to the institutional and policy changes being considered here. And perhaps it is with respect to them that the shock of the 1890s depression and droughts left its most lasting imprint on society. Clearly the strikes and unemployment of the 1890s greatly influenced the agenda and world view of the labour movement in its search for improved working conditions and economic security, a search pursued through enhanced political representation and the creation of new labour market institutions. Also, given the important role of expectations in determining fluctuations in the level of economic activity, the flurry of legislation and associated institution building following Federation may of itself have played a confidence-boosting role in the economy prior to the war.

Although new federal institutions were created during the first decade of the twentieth century partly in response to events in the preceding decade, the key question here is whether New South Wales, Victoria, or any other colony would have experienced a significantly different growth path between 1901 and 1914 had Federation not occurred. Constitutional, political, and related legal arrangements would all have been different in this counterfactual. But within this timeframe neither the level nor distribution of incomes is likely to have been greatly affected.

**The First World War (and its aftermath):** That the First World War delivered a sizable negative shock to the economy is not always appreciated. The mobilisation of troops

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<sup>15</sup> See Forster (1985, 1989) and Issac (2008).

contributed to a fall of 6 percent in total civilian employment between 1914 and 1918. Aggregate real GDP declined by 9.5 percent between 1914 and 1920 before recovery set in. And because of population growth, per capita GDP fell more sharply, by 16 percent between 1914 and 1918. Had this occurred in peacetime, it would be classified as a depression. Other economic indicators of the impact of the war include the disruption to the labour market, the extension of government controls, the plunge in international trade, and the growth in domestic manufacturing due partly to wartime demands but more from the need to find domestic sources for previously imported goods. Given the severity of this shock, it is not surprising that there were significant consequences for the evolution of the institutions and policies we are tracing.

The ‘natural’ protection afforded by wartime interruptions to international shipping encouraged the expansion of domestic production of import substitutes, an expansion that proved vulnerable to lower-cost import competition with the return of more normal trading conditions following the war. The political economy context of the Greene tariff (1921) is thus fairly clear. These war-infant firms faced a short life expectancy unless they received some measure of protection from imports. In the view of some commentators, the resulting hike in some tariffs marks the true origins of a significant protectionist trend towards Australian manufacturing. And the particular adjustments made may have been effective in sustaining activity in respect to the targeted goods and their producers such that the war led directly to the change in the *incidence* of tariff protection. But the *average* level of the tariff does not appear to have risen at this time (Lloyd 2008). And the overall level of protection to manufacturers may have been little changed as any tariff rises were offset by changes in transport and other costs (Pope 1986).

There were also important war-related changes to the labour market regime in the early 1920s. The wartime inflation, and declines in real wages as money wages failed to keep pace, are part of a complex background to important decisions on the basic wage, such as an increase in its level and the introduction of automatic cost of living adjustments in 1922. The economic consequences of these changes to the labour market regime, unlike those made pre-war, are agreed to have been non-trivial. Most assessments focus on distributional issues arising from the changes, and regard them as benign or desirable. Their implications for growth, however, were likely deleterious. Given the deteriorating international trading environment Australia faced in the early 1920s, a mandated increase in real wages (or real

unit labour costs) was not conducive to securing productivity gains, encouraging employment, or improving international competitiveness.<sup>16</sup>

These two examples of institutional and policy responses to the war occurred at the federal level: they concerned federal institutions and policies. In a formal sense, they would not have arisen had no federal government existed, and it has been acknowledged that Federation was in part a response to the earlier shock of the 1890s depression. However, it was the war that led to these changes in institutions and policies in the 1920s which resulted in them having for the first time a significant impact on the economy. These post-war changes were not simply an inevitable response to the earlier slump somehow lagged by three decades. One needs only to consider a no-war counterfactual to get some perspective on this. There would have been no infant firms conceived under war-time circumstances mewling for protection as their survival was threatened by the return to peacetime international trading conditions. And there would have been no convulsions in the labour market to match the impact of war-time mobilisation, nor the inflationary conditions that resulted from the conversion to a war economy.

During the 1920s there are other important institutional and policy changes that were, indirectly, responses to the shock to the economy delivered by the war and its immediate aftermath. One is the creation of the Loan Council, an effort to better co-ordinate the overseas borrowing efforts of the states and Commonwealth governments. The context of this included the war loans that had been raised in London and the resulting debt-servicing burden. It also included a much weakened and straitened international capital market compared to its condition pre-war. The war had brought to an end the first period of globalisation in international finance, and Australia was vulnerable to the deterioration in the conditions facing debtor nations.

Another consequence of the war was oversupply in the international markets for agricultural commodities. The disruption to trade during the war had directly encouraged increased production, especially in the U.S., and this additional capacity was a factor depressing prices in the 1920s. An indirect result of the war was that the newly-created states in Europe adopted a policy of stimulating agricultural output as one of the few avenues available to earn scarce foreign exchange. The war had thus bequeathed to the 1920s serious

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<sup>16</sup> For assessments see Pope (1982), Forster (1989) and Issac (2008).

imbalances in agricultural markets, and Australian farmers' prosperity was vulnerable to these. Under such conditions it is not surprising that the 1920s witnessed a proliferation in various forms of agricultural assistance, subsidy, and support schemes. Some involved the creation of new institutions – such as state marketing boards. The war had resulted in the disintegration of the well-functioning global trading system, and in response there was a marked change in the institutional regime within which Australian farmers produced and marketed their products.

There is an additional feature of the 1920s of interest here as it constitutes evidence that the pre-1890 outward-oriented growth strategy had not by then been superseded with some full-blown inward-oriented alternative. The clutch of policies promoting assisted Empire migration, sub-dividing farms for closer settlement, extending rural branch-line railways, encouraging soldier-settler farming schemes, cross-subsidising rural areas within the PMG, and more, all point to the continued primacy of the view that the critical bottlenecks facing Australia's development were its need for more people and a greater capacity to import. Rural development and the expansion of agricultural exports remained the principal route to this, albeit amid rising concern that the rural sector would be unable to create significant additional employment opportunities. The Development and Migration Commission is an institutional embodiment of this policy, and of its survival into the interwar period. Of course, these policies have been excoriated in later evaluations by economists and economic historians as resulting in wasted public investment and regulatory inefficiencies. But here our aim is to identify the timing and determinants of changes in institutional arrangements and policies affecting growth.

**The depression of the 1930s:** This further external shock began before 1929, with aggregate real GDP peaking in 1926-27. The downturn accelerated thereafter as the post-war international economy collapsed, trade volumes plummeted and capital markets froze. Given the focus adopted here, what were the key institutional and policy responses to the shock of the 1930s depression of greatest importance for long-run growth? First, there was a significant boost to tariff protection for manufacturing. The available data suggest that the Scullin tariff (1930) lifted protection by amounts that leave the earlier increases in rates looking modest (Lloyd 2008). More sophisticated measures may be lacking, but we can conclude that during the 1930s import-competing firms were afforded increased shelter. There occurred some increase across the depression decade in manufacturing as a share of

both GDP and employment, but there is debate about the contributions to this outcome of the increased tariffs and of the devaluation in the exchange rate (Thomas 1988).

The devaluation against sterling was part of the policy response to the crisis and is generally viewed in terms of its short-run contribution to recovery (Eichengreen 1988). But the choice of exchange rate regime, or maintenance of an inappropriate rate, can also have long-run implications for growth. Unlike in the 1890s depression, when leaving the gold-sterling standard was apparently not seriously considered, the historic devaluation of 1931 marks an important regime switch. However, the short-run effects of this and other policy responses have been shown to have probably been of limited effect: the government had few policy tools available and, given its level of foreign indebtedness and dependence on foreign capital, was constrained in their use, having to await the return of more buoyant conditions in the international economy for a full and sustained recovery (Valentine 1987; Siriwardana 1995).

**The Pacific war:** The First World War, the problems in the international economy in the 1920s, and the world slump of the early 1930s were all unambiguously negative shocks for the Australian economy. The economic impact of the Second World War was more complex. It was disruptive to the domestic civilian economy on a scale greater than that of its predecessor. But the disruption on this occasion was by no means so overwhelmingly negative. Australia leveraged impressive growth from its conversion to a wartime economy with real GDP increasing by a staggering 41 percent over the four years after 1938-39 to its (unsustainable) peak in 1942-43. However, this measure of output expansion should be viewed alongside the trend in real private consumption, which declined by 15 percent from 1938-39 to its trough in 1943-44. Clearly there was a much greater diversion of resources into war-related production than in the First World War, sustaining output growth and employment despite the expansion of numbers in the military. Why were the effects on the economy of the shock arising from this war so different? Part of the explanation is of relevance to our examination of how institutions and policies change in response to shocks.

The first point to note is that the capacity of the Australian economy to produce military equipment, munitions and other supplies in 1939 was greatly enhanced as a result of the expansion and especially the diversification of the manufacturing sector after 1914. Steel, chemicals, metal smelting, electrical goods, and car components are just some of the products

domestically manufactured by the end of the 1930s. Both productive capacity and the skills of the workforce were greatly enhanced compared to what had been available for conversion to wartime purposes in 1914. Of course, this expanded capacity resulted to some degree from the protection afforded particular industries and producers during the interwar period. How differently placed Australia would have been at this critical point in its history under the assumption of a post-Federation free-trade regime is an important (counterfactual) question which has not yet been addressed.

There is also a demand-side difference to the domestic economic impacts of the two wars. This is especially clear if attention is focused on the war in the Pacific, as the war came to Australia's doorstep also in the economic sense. Long supply lines had limited the contribution in materiel Australia could make when the principal theatre of war was in Europe, whether between 1914 and 1918 or in 1939. After Pearl Harbor Australia's military-industrial capacity was ideally located to support the war effort in the South-West Pacific. The division of labour that emerged between American and Australian sources of supply after 1942, involving a partial demobilisation of Australian forces to increase the production of war materiel, is an illustration of this.

In this context, the policy responses and institutional changes made under the threat of potential invasion were dramatic. Government planning and regulation extended in detail into the labour market, food production, and most of manufacturing, and to controls on many prices. The uniform income tax agreement with the states permanently changed the revenue balance within the Commonwealth. Domestic savings were mobilised through war bonds. And there was more.

As our focus is on the institutional and policy changes of importance to growth rather than the management of war, the question is what significance for post-war growth lies in these wartime events. One is that the war gave industrialisation its biggest boost, with the 1940s recording a larger increase than any other decade. The share of employment in manufacturing rose from 23 to 29 percent of total employment (between 1939 and 1949), while its share in GDP rose from 18.5 to 26.2 percent.<sup>17</sup> There had also occurred a deepening of the skills base and a rise in relative labour productivity in the sector. There was little

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<sup>17</sup> To put this wartime increase in historical perspective, the share of manufacturing in GDP was 12.1 percent in 1901, and rose only to 16.7 percent in 1929.



further increase in these shares, which were maintained to the 1970s. Thus it was the response to the war in the Pacific that directly bequeathed the greatly expanded industrial sector, while the increases in tariff protection over the previous four decades played only an indirect role.

Many of the other institutional and policy legacies of the war that impinged on post-war growth are familiar, running from the growth in government micro-regulation and macro-management of the economy, through the extended range of social welfare programs. There was also a set of expectations regarding work and thrift, forged in the experience of the depression and war, which probably contributed importantly to sustaining the post-war prosperity. A contrast with the previous war was the opportunity to pay down the foreign war-related financial obligations (due to the unwinding of Lend-Lease arrangements) thus removing the debt overhang which had been such a burden in the 1920s and beyond.

**The end of the post-war boom:** The reasons for the long post-war boom in the international economy are well understood, as are the reasons for Australia sharing in the prosperity. However, it is worth noting that this period was not without some significant shocks to the Australian economy. The Korean War wool boom and the associated terms of trade shock in the early 1950s were, of course, positive in their initial impact. Being positive rather than negative, this shock did not challenge the existing institutional and policy regimes, with the possible exception of the ending of wage indexation to prevent locking in the effects of a temporary spike in inflation. Perhaps this episode serves to illustrate the asymmetric effect of positive and negative shocks on institutions and policy settings. Indeed, institutions and policies that are growth-retarding are more likely to survive under boom conditions. The 1950s and 1960s are thus not a period of major institutional innovation, nor is there any significant change in growth strategy.

A second shock, evident by the late 1960s, had a more ambiguous impact. This was the first of the succession of resource ‘booms’ that have since made a large contribution to the country’s prosperity. The supply-side shock from the minerals boom may have been beneficial to some industries and regions, but was soon understood to be placing serious strains on others, as illuminated by the booming sector analysis developed at the time. And it is in this new context that some key existing policy settings, and the institutions that supported them, came increasingly to be regarded as inhibiting rather than enhancing growth.

Looking back, the minerals boom of the 1960s can be seen as the harbinger of broader shifts in the international economy (especially the low skill-intensive industrialisation underway in resource-poor economies in East Asia). The growth strategy and associated institutional and policy regime that had been sustainable throughout the post-war period, indeed appeared to be the source of much of its prosperity, was now coming under challenge.

The oil price rise, collapse of Bretton Woods, world trade liberalisation, and spread of higher inflation in the early 1970s heralded another bout of (mainly) negative shocks to the Australian economy. This story is familiar, as are the responses thereto, including major changes to policies and institutions. But to conclude this ‘narrative’ section, two observations seem pertinent. First, advocates of the policy and institutional ‘reform’ agenda in and after the 1970s employed arguments based on economic theory, on the evidence of a (putative) relative decline in growth rates, on ideology, and on history. The last-mentioned took the form of the ‘wrong turn’ interpretation of Australian economic history. It emphasised what I earlier described as the conventional or orthodox interpretation of the change in growth strategy from outward- to inward-orientation following the shock of the 1890s depression, and emerging in the first years of Federation in related policy responses and institutional innovations with respect to protection, immigration, and wage determination. As argued above, this interpretation seems in need of qualification, and on several grounds.<sup>18</sup> A more nuanced reading of the historical evidence would have produced a less sweeping arc to the narrative, eschewed a thesis of Federation-era institutional and policy lock-in, and given more weight to the succession of major negative shocks between 1914 and 1945 as independent agents of change.

The second observation concerns the provisional nature of assessments of the wisdom of policy and institutional changes surveyed here, including the cluster associated with the Hawke-Keating government in the 1980s. More evidence accumulates; there are developments in relevant branches of economic theory; and, not least in importance, there are further negative shocks that shift the ground on which the observer of history stands. Hence it will be no surprise if the current economic crisis – which may already have influenced this

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<sup>18</sup> To illustrate, it appears that factors unrelated to (and pre-dating) the post-Federation adoption of inward-oriented policies were responsible for Australia losing its status as having the world’s highest incomes: see Broadberry and Irwin (2007), and McLean (2007a).

writer's perspective – leads to some fresh insight into the significance of the outward re-orientation and microeconomic reforms that followed the shocks in the 1970s.

## **5. Brief Digression: What were the Mechanisms?**

One direction which this inquiry might logically take at this point would be to identify the mechanisms linking the shocks to the responses. In a sense we know a lot about these, perhaps informally and descriptively. But I'm not going to pursue this further here, instead briefly noting some of the questions to pose and some hints from the literature about how to address them, before turning to a discussion of the effects on long-run growth. The questions of interest include the following. What determined whether a shock reinforced or undermined existing institutions and policies? In particular, are there asymmetric effects of positive and negative shocks? What were the mechanisms linking these shocks to any changes in institutions and policies? And, what appears to have determined whether the policy responses and institutional changes that were made following a shock were growth-enhancing or growth-retarding in those cases when, *ex post*, they had a major impact?

The comparative studies of responses to shocks, referred to earlier, essentially examine correlations among country-level characteristics to arrive at suggestions about those associated with the choice of growth-promoting policies. The mechanisms are not identified. In the literature on the political economy of growth, however, a variety of models has been developed to help identify the conditions that are likely to matter in the choice between institutional arrangements and policies that will or will not enhance long-run growth. These include endowments (variously defined), the distribution of income or wealth, the openness of the economy, whether the polity is democratic or non-democratic, and some key features of the constitution.<sup>19</sup> This literature is especially rich in suggestive hypotheses and research designs of relevance to historical inquiry, which I have drawn on elsewhere (McLean 2007b). And both the writings on the responses to shocks and those adopting a political economy approach include some attention to wider cultural attributes – social norms, preferences, informal rules. The possible relevance of these to the explanation of Australia's long-run growth is well recognised wherever comparisons are made with Argentina's historical

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<sup>19</sup> Two influential contributions are those of Persson and Tabellini (2005) and Acemoglu and Robinson (2006).

experience.<sup>20</sup> At a finer level of analysis, the mechanisms of likely relevance to the Australian story of responding to shocks, institutional change, and policy re-directions are described in many economic, historical and political studies. This is especially the case with respect to the history of labour market institutions and policies, and to the history of protection.<sup>21</sup>

## **6. Impact on Growth of the Institutional and Policy Responses:**

The discussion so far has suggested that the timing of institutional and policy regime changes should define the periods within which the effect on growth of a given regime has to be uncovered. And any effect on growth likely varied as a result of each change in the regime. It has further been suggested this approach may lead to different conclusions from those reached in the more conventional bundling of the first 70 years of the 20<sup>th</sup> century into a single episode, to be assessed as if similar institutions and policies were in force across the period with an unchanging degree of application. Here I try to illustrate the implications of this alternative perspective by reference to just a few of the more prominent examples of institutional and policy regimes thought crucial to long-run growth, drawing on a number of the relevant and period-specific assessments available.

**Federation plus:** As noted, the consensus in the literature is that Federation and the passage of early federal laws and establishment of associated institutions with respect to tariff protection, immigration, or wage settlement all had little short-run economic impact. With the expanded demands placed on the federal government by the First World War, specifying a no-Federation counterfactual becomes very much more difficult, perhaps illustrating that the war is a more important source of institutional and policy change than Federation. Even before the depression of the 1930s resulted in a fresh round of demands for expanded federal activities, the role of the federal government in economic life was arguably fairly extensive. Thus to assess whether Australians have benefitted from Federation it is more manageable to examine specific policies adopted, or institutions established, by the federal government. But

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<sup>20</sup> Duncan (1985) provides a concise introduction to the topic.

<sup>21</sup> One general survey of relevance to these themes is Butlin, Barnard and Pincus (1982).

the question posed here is whether this most prominent of institutional innovations resulted, of itself, in enhanced or retarded growth and prosperity.<sup>22</sup>

Of course, there exists something of a natural experiment on whether the individual colonies would have been better off economically not to have federated – ever. Seven colonies participated in the discussions leading up to federation but one stayed aloof. So the New Zealand economic experience since 1901 may help in thinking about the counterfactual of a no-federation world. Specifically, to what extent, and within which periods, was growth and prosperity in New Zealand some indication of what might have been the experience of at least some of the Australian colonies? Until 1960 there is no evidence of per capita GDP in New Zealand falling behind that of Australia, although this does not rule out that it may have been even higher as the seventh state. Nor does it establish that one or more Australian states may have diverged (up or down) from their historical growth experience had they, too, declined to join. After 1970 New Zealand's economic performance fell behind Australia's, despite increased economic integration. Many influences bear on the recent comparative performance of the two national economies, just as there are well-known sources of the changing patterns of growth among the Australian states.<sup>23</sup> Identifying the contribution of Federation per se to the observed outcomes may be difficult, but that is the challenge if it is to be assigned a key role as an institution underpinning long-run prosperity.

**Protection for manufacturing:** In contrast, the implications for growth of the changes to trade policy that followed federation have been more extensively investigated. From the Brigden Report into the tariff, to the inquiries of agencies stretching from the Tariff Board to the Productivity Commission, to a considerable academic literature, there is an abundance of empirical evidence and analysis on whether the increased protection given Australian manufacturing enhanced or retarded growth. The Bridgen Report was equivocal, noting the effects on real wages, income distribution, and on population growth – central social goals at the time. It is not clear that any consensus existed among economists prior to the Second

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<sup>22</sup> Given the attention in the recent growth literature to the importance of different constitutional and political systems it is appropriate to regard Federation of itself as being *potentially* of considerable significance to the subsequent growth performance of the economy.

<sup>23</sup> In this context, the relative contribution of natural resource-based activity in Australasia's regional economies may be an important source of the differences in their long-run performance.

World War as to whether the tariff had to that time raised or lowered *per capita* income relative to some alternative and freer trade policy regime.

Since the 1970s at least, the consensus view has been that by distorting prices and misallocating resources, the higher levels of post-war protection (tariff and non-tariff) reduced productivity levels. The policy switch in 1973/1983 ushered in a period of tariff reductions, reversing the increases that occurred between Federation and the middle of the century. The higher growth rate since 1991 (compared to that in the previous two decades) is generally thought to be due in substantial measure to this policy shift.

The question posed here is whether there would have occurred higher growth rates in earlier decades of the 20<sup>th</sup> century had protection remained low (say, no increases on that applying at Federation). In the course of the policy debates in the 1970s and 1980s, the implication was that Australia had taken a welfare- and growth-reducing policy direction from the beginning of the century.<sup>24</sup> However, what is needed is an indication of the extent to which the *actual* policies adopted reduced growth, and whether that (putative) reduction varied over time – prior to 1914, during the 1920s, during the depression, and in the immediate aftermath of the Second World War. What evidence exists suggests a more nuanced assessment of the impact of the tariff may be in order.

Recent cross-country historical analyses of tariffs and growth have raised the possibility that the robustly negative and significant relationship observed in studies of the final decades of last century may not be discernible in the evidence for earlier periods.<sup>25</sup> These analyses, which often include Australia, suggest that the inverse relationship is clearest only for the post-war decades (or even since about 1960); that there is no significant relationship during the turbulent inter-war period; and that for the period prior to 1914 the relationship turns positive and significant.<sup>26</sup> One possible explanation is that the policies adopted by one's trading partners matter to the benefits obtained from decreased domestic protection – perhaps accounting for the inconclusive results for the interwar period. Another lies in closer analysis of the sectoral composition of pre-1914 trade, where the positive

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<sup>24</sup> For a discussion dating from this period, see Anderson and Garnaut (1987).

<sup>25</sup> This is a historical branch of a wider empirical debate about the relationship between openness and growth: key contributions include Frankel and Romer (1999) and Rodriguez and Rodrik (2001).

<sup>26</sup> See O'Rourke (2000), and Clemens and Williamson (2004).

relationship between tariffs and growth may be driven primarily by the evidence from commodity exporters (such as Australia), suggesting that period-specific factors were operating then but not after 1945 when manufactured products were more important in world trade (Lehmann and O'Rourke, 2008).

Was Australia an exception? There are few studies into this question, and the results to date are unclear.<sup>27</sup> Yet this line of historical inquiry is of considerable importance to how we assess the policy choices made. Also, we should note the conclusion in a recent study that the principal reason for relatively low volatility in the Australian economy despite repeated commodity terms of trade shocks since 1900 was the increase (to about 1970) in the share of the manufacturing sector (Bhattacharyya and Williamson 2009).<sup>28</sup> If lower volatility is favourable to long-run growth, this suggests yet another reason why protection for that sector may not always have been unambiguously growth-inhibiting. Finally, it has been suggested that the role of the tariff in accounting for the increased share of manufacturing in output to 1939 may have been less than that of other sources, including changes in consumer demand patterns and technological change (Merrett and Ville 2007). Insofar as the negative impact of the tariff on productivity and growth was thought to have arisen through an inefficient allocation of resources into the manufacturing sector, the importance of this transmission mechanism may have been overstated.

Only an interim assessment of the implications of this recent work is possible. What is unaffected (to date) is the orthodox interpretation that Australian growth was increasingly retarded (or potentially would have been retarded) by the high tariffs and non-tariff barriers which characterised the post-war era, and that the reduction in protection following the 1970s improved productivity and living standards. What is now unclear is whether the counterfactual of free (or significantly freer) trade in either the interwar or pre-1914 periods would have resulted in greater prosperity, and hence whether the increasingly protectionist policies pursued at those times were significantly growth-retarding or had relatively little impact on per capita incomes.

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<sup>27</sup> See the evaluation of Brigden's analysis by Tyers and Coleman (2008).

<sup>28</sup> A similar conclusion was earlier reported by Gillitzer and Kearns (2005).

**Labour market regulation:** Similar importance attaches to the historical analysis of the effects of labour market regulation on Australian growth. For some other countries, the relationship between labour market institutions and productivity performance has been the subject of comparative analysis, illustrated by the debate concerning the sources of different U.S. and European growth rates and living standards in recent years. But in Australia there seems to have been less attention to the evidence about the impact of the choice of labour market regime on growth in the long run than has been given its distributional consequences and the detailed history of its internal evolution.

We have already noted the assessment that any economic impact of the post-Federation changes to labour market institutions was at best modest before the end of the First World War, but that changes made in the early 1920s most likely inhibited growth in that decade. Discussions of the impact of the labour market regime on the economy during the depression of the 1930s focus more on short-run distributional issues, including the unknown extent of informal non-compliance with legislated wages and conditions. With respect to the recent past, the debates are on-going over whether ‘mixed’ regimes resulted in inferior productivity outcomes relative to either extreme of decentralised or highly centralised, or indeed over whether there exists any robust relationship between the labour market regime and growth.<sup>29</sup> Hence it is perhaps too early to identify with any confidence the contribution of labour market reforms to recent changes in productivity performance or growth, relative to that of influences such as other microeconomic reforms, computerisation, globalisation, and the resources boom. For assessments covering the longer sweep of Australia history, there appears to be some diffidence in claiming that a strong and empirically-based relationship has been established between a particular labour market regime and productivity or growth performance.<sup>30</sup> Perhaps, as has been suggested here, the task would be assisted by breaking it down into periods defined by regime changes more frequent than that implied by the conventional view of a single regime persisting through all but the final decades of the twentieth century.<sup>31</sup>

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<sup>29</sup> For a survey stressing the ‘fragility’ of the results in the cross-country studies, see Flanagan (1999).

<sup>30</sup> For example, see Hancock and Richardson (2004), especially pp.185-186 and 194-197.

<sup>31</sup> Rosenbloom and Sundstrom (2009) illustrate the approach in their recent survey of U.S. experience.



**Other institutions and policies:** The analysis of the role of shocks in driving institutional and policy changes having significant implications for long-run growth could be extended to other areas of the economy. For example, given the importance of the financial sector to growth, the evolution of capital market institutions and their regulation may also fit a pattern of regime change in response to negative shocks. But as indicated earlier, this exploratory essay aims to illustrate the argument, not claim to be comprehensive. A different approach would entail identifying an institution or policy claimed to have had a significant impact on growth and examine its origins and evolution, looking especially for any role played by negative shocks. An example is suggested by the provocative hypothesis that the development of Australia's mineral sector in the post-war period had been delayed for several decades by growth-inhibiting regulations and policies.<sup>32</sup>

I will also eschew a review of the attempts to assess the contribution of the reforms of the 1980s to growth and productivity since 1991. But in the perspective adopted here these efforts are important for at least two reasons. First, they nicely illustrate what is required by way of careful empirical analysis in order to assess the consequences for growth of the changes in institutional and policy regimes in place in earlier periods. And second, they indicate the challenge posed by such a research agenda, especially for periods with poorer data.

## **7. Conclusion.**

It is not a puzzle that many commentators have interpreted aspects of Australia's twentieth century economic history through a particular lens, where the 1890s depression, strikes, and social distress were not just traumatic for the generation who lived through them, but defining for the direction taken by subsequent generations of policy makers. Such a lens may be appropriate for describing and explaining the internal evolution of particular Federation-era institutions and policies, especially their legal and political aspects. But their economic impact was minimal before 1914. Subsequently they were extensively adapted and modified, but this occurred primarily in response to later shocks. And it was only following these shocks, and the resulting institutional and policy changes, that we can discern evidence of a

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<sup>32</sup> The reference is to David and Wright (1997), especially pp.234-237; and Wright and Czelusta (2007), especially pp.191-194 and 201-204.

significant impact on growth. Of course, none of this diminishes the possibly important role the initial set of Federation-era institutions and policies may have played in achieving particular distributional outcomes, or in moulding or reinforcing certain social norms or notions of fairness, then or later. In this respect there could occur a (beneficial) feedback, though any such endogenous mechanism has yet to be identified in empirical studies of growth in Australia.

A stronger version of the perspective offered here is that the succession of institutional and policy changes that have been discussed did not retard (impede, lower) Australian growth prior to 1939, and that some of these policies better prepared the economy to meet the challenges arising from the Pacific War (1941-45). Indeed, the inward-oriented phase of growth did not fully kick in until 1940, though the re-direction seems set by 1929. Thereafter any growth-retarding consequences were concealed first by war and then by the boom that followed. The historically favourable global economic conditions in the immediate post-war period would probably have delivered prosperity to Australia under a wide variety of institutional arrangements and policy settings, as is revealed by the ubiquity of high (convergence-adjusted) growth rates during this golden age. Only with the first post-war mineral boom in the 1960s, and the (related) expansion of low-skill and labour-intensive industrialisation in East Asia, did the potential arise for key elements of the existing institutional and policy regime to retard growth if they were not modified.

The current crisis may be the first major ‘stress test’ of the wisdom of the changes made to institutional arrangements and policy settings dating from the 1980s. The critics of outward orientation and of the reduced regulation of markets are re-emerging in the wake of the crisis, and there has begun a reassessment of aspects of theory in finance and macroeconomics. Thus the ‘test’ for current institutions and policies arises at the intellectual level, in the political sphere, and in terms of popular support – all features of the responses to previous major negative shocks to the economy.

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