Review of Income and Wealth
Series 40, Number 2, June 1994

HOW DID THE WEALTHIEST AUSTRALIANS GET SO RICH?

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Two hundred sixty-three of the largest Australian fortunes are classified by date and industry of origination. More began in property development, sheep ranching and clothing manufacturing than in other industries. First generation immigrants own more than twice the number of fortunes as would be expected on the basis of their proportion of the population. A panel of experts judged that three-quarters of the fortunes originated in competitive industries. One explanation for large fortunes accumulating in competitive industries is extraordinary returns to disequilibrium (innovation and product differentiation). Other explanations include the assumption of risk and the return to scarce entrepreneurial and managerial skills. Progress in communication and transport technology have made it possible to leverage modest Ricardian rents into large profits via chain operations.

I. INTRODUCTION

Hardly a day passes without an Australian newspaper or magazine reporting the activities of some of the country's wealthiest citizens. Kerry Packer and Rupert Murdoch, among others, frequently are the focus of media scrutiny. Descriptions of their great wealth foster emotions of admiration, envy, curiosity, and suspicion, but there are other reasons to examine a country's fortunes, as well. Many of the wealthiest individuals in an economy represent the winners in economic ventures where investment is attracted by a lottery-type distribution of expected returns, so-called "winner take all" games. Identification of industries which attract entreprenurial talent because of such incentives may improve our understanding of investment patterns. It may also tell us something about the distribution of skills, of opportunities, or perhaps of pure chance in the economy.

The accumulation of vast concentrations of wealth also raises questions about the extent of competition. First year university economics students are taught that extraordinary returns quickly attract attention and entry in a competitive economy, which in turn increases supply and depresses price, so that in the long run only "normal" profits can be achieved. How then, in such an economy, could hundreds of fortunes have been accumulated with a net worth exceeding A$30 million?[1] Do such fortunes imply the absence of competition?

Note: Susan Carr, Michell Stevens and Caroline Siegfried helped with research assistance. This research was conducted while John Siegfried was a Fulbright Senior Scholar at the University of Adelaide. The authors are grateful to the twenty-nine Australian industrial economists, economic/business historians, and lawyers who assisted in industry classification, and to two anonymous referees and Rudolph Blitz, who offered advice on an earlier version of this paper. Several paragraphs in this article are reprinted with permission from Siegfried and Roberts (1991), and Blitz and Siegfried (1992).

[1]A$30 million is the minimum estimated wealth, in 1990 dollars, to earn a position on the lists of rich Australians analyzed in this paper.

There is also interest in distributional matters because neoclassical welfare prescriptions depend on income and wealth distributions, and because economic progress may depend vitally on the lust for great personal wealth by individuals. In modern society distributive shares are a matter of widespread concern, perhaps because of new views on the nature of distributive justice and emphasis on the role of "fairness."

Our primary purpose in this article is to identify those industries in which the largest Australian fortunes of 1990 originated, and to evaluate the extent to which those industries were competitive when the seeds of this wealth were sown. Having identified these fortunes, we asked a panel of experts to evaluate the degree of competition in the industries when the fortunes were spawned.[2] We compare the Australian findings with those from similar studies of the U.K. and the U.S. and offer some explanations for the relatively large number of fortunes which originated in competitive industries.

II. Data and Method of Evaluation

We amalgamated the 200 wealthiest Australians reported in *Business Review Weekly*, April 6, 1990 with a similar list from *Australian Business*, September 26, 1990. After eliminating duplicate entries and combining individuals who obtained their wealth from the same source, 263 separate fortunes remained. To estimate wealth, the two business magazines rely mainly on external sources, including prices of publicly traded shares, prevailing price/earnings ratios to value privately held shares, art auction results, marriage notices, and public documents lodged with corporate affairs departments. The process is likely to inflate the fortunes of first generation ("self-made") individuals and understate the fortunes of "old wealth." Most first generation wealth remains invested in the company that spawned the fortune. The fortunes are valued by multiplying the share price by the number of shares owned. Such a practice, however, assumes that these large blocks of shares could be sold without depressing the share price. As this is unlikely, we believe that self-made fortunes are overstated. Inherited wealth, on the other hand, is more likely to be diversified and concealed—held in trusts, homes, jewelry, art collections and the like, or in overseas investments—and consequently is more difficult both to identify and value. The effect of these biases is to include relatively more self-made fortunes among the largest Australian fortunes than a more accurate accounting would reveal.[3]

[2]An assessment of the extent of agreement within the panel and a detailed description of its composition is in Round and Siegfried (1994).

[3]We do not claim to analyze precisely *the* 263 largest Australian fortunes. Even if the magazines successfully identified the wealthiest individuals in Australia in 1990, the fortunes held by individuals on the list are not necessarily the largest family fortunes. Some of the largest fortunes are sufficiently fragmented so that no one heir possesses enough wealth to make the "top 200" list, yet the number of people who have derived their wealth from the fortune is sufficiently large that its aggregate value would rank it among the largest in the country. For example, the Cassegrain family fortune, estimated at $A50 million in 1990, is divided between French immigrants Gerard and Francoise and their six children so that no one owns the $A30 million necessary to make a top 200 list. Yet the family businesses in heavy equipment spare parts, wrecking, wine making, forestry, construction, and engineering are operated as an integrated unit (*Business Review Weekly*, April 6, 1990, p. 145). Since the magnitude of the fortunes is not used in the subsequent analysis, however, the problems encountered in the valuation and ranking of fortunes are not important here.

The descriptions in the two magazines enabled us to identify the industry in which most fortunes *originated*.[4] We categorized fortunes according to their *original* source. The distinction between the original source of wealth and the means by which that wealth has been preserved or expanded can be illustrated by Isador Magid, who started in business with his father selling snack foods in Melbourne in the 1940s. It was only when the assets from the snack food sales were fortuitously invested in residential subdivisions and shopping centers, however, that his wealth skyrocketed. We classify Magid's fortune as originating in snack food on the rationale that only the original agglomeration of wealth from snack food sales allowed him to become involved in property development.

The date of birth of the fortunes could, in most cases, also be determined from the two magazines. Some cases required additional research to determine the approximate date the fortune began to accumulate, and a few are only educated estimates.[5] In general the origination date represents the time when the entrepreneur first entered the industry that eventually fostered the financial success. In a few cases, e.g. Paul Hogan, the start date is when the entrepreneur began to make extraordinary profits.

Fortunes are classified as self-made if the entrepreneur who generated the initial wealth is still alive and in control of the fortune. All others are classified as inherited, even though some individuals in this category received wealth through distribution during the lifetime of their benefactor. Of the 263 fortunes, 174 are self-made and 89 are inherited.

In his treatise on inherited British wealth Josiah Wedgwood (1929, p. 7), obviously thinking of the wealth distribution in America, argued that:

> "in 'new' countries . . . inherited wealth is likely to form a smaller proportion of the total property, and the influence of inheritance is consequently likely to be less than in the case of old established countries [like Britain]. For the bulk of the property owned by the inhabitants . . . [in America] must have been freshly acquired by the enterprise and industry of relatively few generations of settlers."

The first fleet of European immigrants to Australia arrived in 1788. By then the path over the Atlantic from Europe to North America was already well worn. Furthermore, many of Australia's early settlers were British convicts. Free immigration did not assume a great proportion until the mid-19th century, at the time of Australia's first gold rush. In the first century of settlement, wealth was accumulated mainly by those who obtained land, either by purchase (with wealth brought from Britain), by favors of colonial governors, or by being in possession at the right time ("squatters"). Waves of immigration occurred after World Wars I and II, in the latter case especially from countries newly under communist control. Most of these immigrants arrived with little, if any, financial capital. Thus

[4]In a few cases we relied on additional research to identify the industrial source of the wealth or reconcile conflicting reports in the two lists. In nine cases simultaneous investments in two industries led us to divide the fortune between the industries, thus creating "half fortunes."

[5]In most cases wealth began to accumulate soon after the initial entrepreneurial venture. In a few cases wealth accumulation lagged the initial venture. The differences rarely affect our analysis, however, since the extent of competition in an industry seldom changes over the intervening period.

Wedgwood's argument would appear to apply even more forcefully to Australia than to America.

The evidence mildly supports his hypothesis. Sixty-six percent of Australian fortunes in 1990 were self-made, while the corresponding fractions for Great Britain and the U.S. around that time were 60 and 59 percent, respectively (see Table 1).[6]

This and subsequent comparisons with British and American fortunes are based on Siegfried and Roberts (1991) and Blitz and Siegfried (1992). The methodology is shared by all three studies. An important difference among them, however, is the relative size of the sample investigated. The U.S. study includes 265 of the largest fortunes in America, roughly one fortune per million population. The British study includes 200 of the largest U.K. fortunes, about three fortunes per million population. The 263 Australian fortunes represent about 16 per million population. Thus, the Australian sample goes furthest into the wealth distribution. Consequently comparisons among the three countries should be made with care. The industrial composition of great fortunes, for example, may differ considerably as one probes deeper into the wealth distribution. To illustrate, none of the 265 U.S. fortunes were achieved by authors, musicians, actors, or professional athletes, whereas 22 British fortunes and 5 Australian fortunes came from these occupations. One suspects that some of the Madonnas, Stephen Kings, Jack Nicholsons, and Michael Jordans of America would be included if the American list were extended further down the distribution of largest fortunes.

The degree of competition prevailing in each of the originating industries was evaluated by a panel of 29 industrial economists, economic and business historians, lawyers who specialize in trade practices, and a merger and acquisition specialist at a large merchant bank.[7] The panelists classified each of the industries as either competitive (perfectly competitive or sufficiently competitive that expected long-run equilibrium economic profits at the margin are negligible), or non-competitive (to a sufficient extent that expected long-run equilibrium economic profits at the margin are positive).

The value of an opinion survey on competition over "objective" indexes like concentration ratios is that respondents will differ in the weight and interpretation placed on different aspects of market structure and firm behavior. The results thus provide an assessment of competition that reflects the weighted average of the participants' views about the appropriate way to evaluate competition.[8]

[6]Although the ratio of self-made to inherited fortunes must be interpreted with care, the fractions of fortunes in each country which are self-made that we report here are tabulated similarly. Thus measurement errors should be similar in the three samples.

[7]The panelists were selected on the basis of their qualifications to evaluate the state of competition in different industries at different times. We received 29 responses to 42 surveys. At least 14 are from economists and at least 9 are from either economic historians or lawyers with significant experience in competition policy. The remaining 6 responses were provided anonymously. Eight of the 14 identified economists plus one anonymous respondent are prominent Australian industrial organization economists.

[8]We asked the panelists to rate competition for as many of the 160 cases as they could, but stressed that they should leave blank those for which they felt uncomfortable making an educated guess. All but five of the industries were rated by at least 18 panelists: 19th century horsedrawn Melbourne taxicabs ($n = 10$); real estate brokerage services, and marine services from 1901 to 1945 (for both $n = 14$); and tea for 1901 to 1945, and coffee plantations for 1946–65 (for both $n = 17$). The assessment of competition for none of these was sharply divided. At least 60 percent of the rating panelists agreed on the competition category for 128 cases.

The 263 fortunes originated in 112 different industries, but many began at different times.[9] To refine the assessment of the competitive environment four historical periods were arbitrarily delineated: prior to Australian federation in 1901; 1901 until the end of World War II in 1945; 1946 to 1965; and 1966 to 1985.[10] Distributing the source industries across these time periods created 160 separate cases. Panelists were asked to evaluate the degree of competition for each case.

III. The Age of the Fortunes

The oldest fortune is held by Roderic O'Connor, a seventh generation operator of Tasmania's Connorville sheep station (ranch), founded in 1824. Three fortunes were but five years old in 1990, including those of Paul Hogan, whose wealth skyrocketed with the 1986 movie release of *Crocodile Dundee*; Hogan's agent and co-producer, John Cornell, whose fortune we (narrowly) classified as separate from Hogan's; and Robert de Crespigny's gold mining development fortune.

The distribution of origination dates for all 263 Australian fortunes is reported in Table 1. Naturally, the inherited fortunes are older than the self-made ones. In 1990 the median inherited fortune was 69 years old, while the median

TABLE 1

Origination Dates of Large Fortunes: Australia, Great Britain and the United States

Period	Australia (1990)		Great Britain (1988)		United States (1986)	
	Self-made	*Inherited*	*Self-made*	*Inherited*	*Self-made*	*Inherited*
Pre 1800	0	0	0	14	0	0
1800–1849	0	6	0	8	0	5
1850–1899	0	24	0	14	0	24
1900–1939	10	38	2	3	28	61
1940–1959	77	17	23	8	86	12
1960–1969	48	2	30	0	30	1
1970–1979	32	2	32	0	12	1
1980–1986	7	0	4	0	1	0
Unknown	0	0	30	32	0	4
Total	174	89	121	79	157	108
Median year	1958	1921	1964	1820	1950	1919

Source: Authors' calculations based on data derived from *Business Review Weekly*, April 6, 1990 and *Australian Business*, September 26, 1990; Siegfried and Roberts (1991); and Blitz and Siegfried (1992).

[9]The 112 industries and their competitive classifications are identified in an appendix available from the authors. Three non-industry categories were required to allow us to classify all of the fortunes: diversified investor; corporate manager; and inventor. Thus there are 115 categories. The panel was asked to rate competitiveness in only 114 categories because we inadvertently omitted general publishing from the questionnaire. We classified it as non-competitive on the basis of a similar decision by the panel for newspaper, magazine, and business publications. The number of different industries in which the fortunes originated is, of course, dependent on the degree of aggregation used to define industries.

[10]The relevant post-war period was simply divided in half. No fortunes in our sample originated after 1985.

self-made fortune was a sprightly 32. The oldest self-made fortune is the Smorgon empire, started in 1926 as a kosher butcher shop. Thirty-five of the 263 fortunes began in the five-year period after the end of World War II, an entrepreneurial bubble similar to the post-war prosperity experienced in the U.S. (Blitz and Siegfried, 1992, p. 14–15). The post-war economy apparently offered unusual opportunities for entrepreneurship resulting from the deferred consumption demand of the war years combined with a new breath of optimism.

Table 1 also compares the age of the Australian fortunes with the age of British and American fortunes. It is no surprise that the oldest inherited fortunes are in Great Britain. One-sixth of the largest British fortunes derive from "land-holding," often originating from a grant from the Crown.[11] The largest of these fortunes belongs to Queen Elizabeth's House of Windsor. Some of the Crown grants date back as far as the 14th century. The very nature of European settlement in North America and Australia precludes similarly aged fortunes. The median age of American inherited fortunes is 67, compared with an age of 69 for Australia.

The age distribution of self-made fortunes differs from that of inherited ones, however, with Britain's being the youngest (24 years) and the self-made American fortunes being the oldest (36 years). The median age of Australian self-made fortunes is 32 years. The age of self-made fortunes depends on the age of a country's entrepreneurs, and their longevity.

IV. First Generation Immigrants

The founders of 89 of the 263 Australian fortunes were first-generation immigrants who migrated to Australia from 25 different countries.[12] First generation immigrants seem to have prospered more than the descendants of earlier waves of European migrants. The percentage of self-made fortunes originating with immigrants greatly exceeds the percentage of the Australian population which was born outside Australia.[13] Since the self-made fortunes started at different times between 1925 and 1985, no one population census date provides a definitive benchmark for comparison. The percentage of the population born outside Australia, as recorded in the 1921 to 1976 Australian censuses ranged from 9.8 to 20.2 percent. However, the fraction of self-made fortunes which were initiated by first generation immigrants is 35.1 percent (they number 61), about twice as large as first generation immigrants' presence in the population. Given that few immigrants arrived with either inherited wealth or their own personally-accumulated financial capital, it appears that they simply were more entrepreneurial than non-immigrant Australians. Many of these immigrants fled communist regimes in Eastern Europe.

[11] These are the Dukes and Duchesses of various places.

[12] Eastern European countries contributed the most successful immigrant entrepreneurs. Of the 89 fortunes attributable to immigrants, 17 are owned by immigrants from Great Britain, 16 from Poland, five each from Czechoslovakia, Germany, Hungary and Ireland, and four each from Russia and Italy.

[13] The comparison is based on self-made fortunes only. The appropriate benchmark for all fortunes, including the inherited ones, would be the fraction of the Australian population who were either immigrants or the descendants of immigrants, which would, of course, exceed 99 percent. By looking only at self-made fortunes we can compare the proportion of a rough cohort of very wealthy Australians who immigrated with the population from the same cohort.

In view of the usual stifling of entrepreneurial energy in socialist economies it may not be surprising that the immigrants brought with them considerable entrepreneurial spirit as well as human capital.

The immigrant fortunes originated in waves. Over half (16 of 30) of the (inherited) fortunes which originated prior to 1901 were initiated by immigrants, 13 of them emigrating from Britain or Ireland. Although 48 fortunes began between 1901 and the beginning of World War II, only 27 percent of them were started by first generation immigrants. Immigrant entrepreneurship rebounded after World War II, however. Forty-four percent of the 94 fortunes initiated in the 1940s and 1950s can be traced to first generation immigrants. Of the 41 immigrant-initiated fortunes originating between 1940 and 1959, 11 were accumulated by Polish immigrants, 5 by Hungarians, 4 by Czechoslovakians, 3 by Germans and 3 by Italians, illustrating how World War II redistributed entrepreneurial aptitude.

V. The Geese That Laid the Golden Eggs: The Originating Industries

The industries in which Australia's largest 263 fortunes originated range alphabetically from accounting and acting to wine making and wool processing. They include such unusual businesses as oyster fishing, bookmaking, 19th century horsedrawn taxicabs, and the manufacture of shoe polish, as well as more mundane activities, including sheep and cattle stations (ranches), commercial construction, flour milling, meat processing, steel fabrication, grocery retailing, car parks, and wholesale trade. The most common industries in which Australia's great fortunes began are property development, accounting for 13.1 percent of the total; sheep station (5.7 percent); clothing manufacture (3.8 percent); automobile dealer (3.2 percent); retail grocery (3.2 percent); retail clothing (3.0 percent); and newspaper publishing (2.2 percent). The leading sources of wealth are clearly varied.

Australian source industries can be compared with those of Great Britain and America. Property development leads in all three countries (after excluding the unique "land holding" category from Great Britain). Beyond property development, however, the most common sources of great wealth vary dramatically across the three countries. Sheep stations account for almost 6 percent of Australia's great fortunes, but none in either Great Britain or the U.S. The discovery of oil created over 8 percent of America's great fortunes, but is the source of no large fortunes in either Australia or Great Britain. Music makes up the source of 6 percent of British fortunes, but is related to only one (Dick Clark, originator and producer of "American Bandstand," a television show that lasted almost 40 years) of the fortunes in America and Australia combined. The sources of fortunes in Australia are less concentrated than the two other countries. The leading three industry sources combine for 23, 32 and 38 percent of the largest fortunes in Australia, Great Britain, and the United States, respectively.

In order to provide perspective on how Australians have been getting rich in recent times, we aggregated the self-made Australian fortunes into nine broad categories and compared the result to the distribution of 1958 gross national product originating in the same categories (1958 is the median date of origination

TABLE 2

DISTRIBUTION OF 1958 GROSS NATIONAL PRODUCT AND THE WEALTHY SELF-MADE AUSTRALIANS, 1990
(in percents)

	(1) Distribution of Australian GNP 1958	(2) Distribution of Largest Self-Made Fortunes[a] (median start = 1958)	(3) Distribution of Largest Inherited Fortunes (median start = 1921)
Agriculture, forestry, fisheries	14.4	6.5	32.2
Mining	1.6	1.9	1.7
Building and construction	7.5	6.2	4.0
Communication and transport	7.7	5.0	3.4
Electricity, gas, water	3.1	0.0	0.0
Manufacturing	28.6	17.1	32.8
Finance, insurance, and real estate	2.9	25.2	6.9
Retail and wholesale trade	15.6	20.8	14.9
Services	6.3	17.1	4.0
Other (including government, and ownership of dwellings)	12.3	0.0	0.0
Total	100.0	99.8[b]	99.9[b]

Source: Authors' calculations based on data from *Business Review Weekly*, April 6, 1990, and *Australian Business*, September 26, 1990, and Commonwealth Bureau of Census and Statistics, Australia, Australian National Accounts 1948–49 to 1964–65, Table 13, "Gross National Product at Factor Cost, by Industry, 1948–49 to 1962–63," Canberra, ACT, p. 25.

[a]Includes only those 160.5 of the 174 self-made fortunes which could be assigned to an industry.

[b]Percentages do not sum to 100 owing to rounding.

of the self-made fortunes). The tabulations are reported in columns (1) and (2) of Table 2, which reveal that finance and property development, and retail and wholesale trade are overrepresented among the richest self-made Australians. Government and largely government-owned communication, transport, and utilities, naturally generated few fortunes. Agriculture and manufacturing also are underrepresented as a source of self-made Australians' fortunes.

The sources of self-made Australian fortunes are juxtaposed with the sources of inherited Australian fortunes in columns (2) and (3) of Table 2. This comparison shows that the more recently rich have used different roads to their wealth than were travelled by their predecessors. Agriculture and manufacturing were much more important sources of great wealth around World War I than they were in the mid-1950s. Finance and property development, and services had largely replaced agriculture and about half of manufacturing as the source of great wealth by the post World War II period.

The industrial base for immigrant fortunes is noticeably different from the industrial base for non-immigrant fortunes. Both distributions are reported in Table 3. Immigrants' fortunes originated disproportionately in agriculture, manufacturing, and wholesaling, and are underrepresented in mining, construction, finance, insurance, and real estate, retailing, and services.

The origins of immigrant fortunes are even more concentrated than Table 3 implies. Disaggregating the broad sectors we find that of the 89 immigrant fortunes, 9 originated in property development, 6.5 in clothing manufacture (plus

TABLE 3

DISTRIBUTION OF FORTUNES ORIGINATED BY IMMIGRANTS AND NON-IMMIGRANTS, 1990

	Percentage Distribution[a]	
	Immigrant Fortunes	Non-immigrant Fortunes
Agriculture, forestry, fisheries	21.0	12.8
Mining	0.0	2.7
Building and construction	3.6	6.4
Communication	2.4	1.2
Transport	1.2	3.7
Electricity, gas, water	0.0	0.0
Manufacturing	28.1	19.8
Finance, insurance, and real estate	13.2	21.6
Retail trade	13.8	16.8
Wholesale trade	7.2	0.9
Services	9.6	14.0
Total	100.0	100.0

Source: Authors' calculations based on data from *Business Review Weekly*, April 6, 1990 and *Australian Business*, September 26, 1990.

[a]Distributions based on those 247.5 fortunes assigned to industries. Excludes 5 corporate managers, 8.5 diversified investors, and 2 inventors. Based on 83.5 immigrant and 164 non-immigrant fortunes.

2.5 in textiles, 1.5 in hosiery, and 1 in carpet manufacture), 6 in pastoral, 4.5 in clothing retailing (plus 1 in drapery retailing and 1 in fabric retailing), 4 in restaurants, 3.5 in diversified investing, and 3 each in commercial construction, timber and wineries. Thus, 49.5 of the 89 immigrant fortunes began in just nine narrow industry groups. Twenty-four of the 89 are connected to wool production or the manufacture and sale of textiles, clothing or fabric. Immigrants account for 24 of the 42 fortunes connected to wool, textiles, or apparel, but they initiated only 89 of the 263 fortunes. "Go west, young man" may have been the road to success in the pioneer days of America, but in Australia, as least so far as immigrants were concerned, a better admonition might have been "first in, best dressed!"

The 17 immigrants from Great Britain spread themselves widely, over 16 different narrow industry categories. In contrast, three-quarters of the 16 Polish immigrants clustered together in the manufacture of textiles and clothing (10) and retail clothing (2). The difference undoubtedly reflects the diversity of skills they imported from Europe, and the greater mobility of English speaking immigrants from Great Britain to move about Australia both occupationally and geographically.

The sectoral distribution of all of the Australian fortunes is compared with the U.S. and Great Britain in Table 4. After adjusting the British agricultural category to exclude landholding, it is apparent that many more fortunes are agrarian-based in Australia than in either of the other two countries.[14] The exploitation of natural resources plays a large role in America, however, where oil exploration is included in the mining sector. Although finance, insurance, and real estate, and wholesale and retail trade account for close to forty percent of the great

[14]Only one British fortune is attributable to agriculture after "landholding" is excluded from the category.

TABLE 4

INDUSTRIAL DISTRIBUTION OF LARGE FORTUNES IN THE UNITED STATES, GREAT BRITAIN AND AUSTRALIA
(in percents)

	United States ($n=265$)	Great Britain ($n=200$)	Australia ($n=247.5$)
Agriculture, forestry, fisheries	3.6	17.0[a]	15.6
Mining	8.1[b]	0.8	1.6
Building and construction	1.3	4.5	5.5
Communication, transport and utilities	5.1	3.5	4.4
Manufacturing	28.9	21.7	22.8
Finance, insurance, and real estate	33.8	36.5	18.8
Retail and wholesale trade	8.1		18.7
Services	11.1	15.5	12.5
Unclassified	0.0	0.5	0.0
Total	100.1[c]	100.0	99.9[c]

Source: Authors' calculations based on data derived from *Business Review Weekly*, April 6, 1990 and *Australian Business*, September 26, 1990; Siegfried and Roberts (1991) and Blitz and Siegfried (1992).

[a]Includes "landholding."

[b]Includes oil exploration.

[c]Percentages do not sum to 100.0 owing to rounding.

fortunes in all three countries, the mix between finance and trade differs noticeably between the U.S., where finance accounts for eighty percent of the combined sectors, and Australia, where the importance of wholesale and retail trade equals that of finance.[15]

VI. DOES COMPETITION MAKE A DIFFERENCE?

Of the 112 different source industries for the 263 fortunes, 69 were judged competitive and 41 were judged non-competitive throughout all four periods by our panel. Flour milling and retail grocery were judged to have been competitive initially, but non-competitive in later periods.[16]

[15]Cross country comparisons are hazardous for reasons beyond the differing sample sizes relative to population. The U.S. data were assembled prior to the October 1987 stock market crash, the British data were gathered immediately after the crash and the Australian data were collected after economic recovery. Differences in the importance of the financial sector in generating fortunes may partly reflect changes in economic conditions rather than inter-country differences.

[16]Over 70 percent of our panel rated acting, professional golf and horse training as competitive. In reaction to similar treatment of musicians, actors, authors, and inventors in the study of the wealthiest Britons (Siegfried and Roberts, 1991), Don Waldman (1991) contended that these occupations are monopolies because there are formidable barriers to entering them—namely personal talent. While the correct competition classification of a half-dozen fortunes (or even 31, as was in dispute in the British study) does not alter the conclusion that *a large fraction of the biggest fortunes derived from competitive industries*, the panel, and we, disagree with Waldman. Our interpretation of personal service occupations is that people like Michael Jordan, Paul Hogan or Greg Norman (Jordan is Waldman's example, albeit Jordan is not among the wealthiest 400 Americans) earn large economic rents because of their differential skills, namely their advantage over people like Waldman, Siegfried, and Round in playing basketball, acting, or playing golf. We view the advantage of actors and sports performers akin to successful clothing retailers, whose scarce talent is in selecting popular fashion and selling rather than shooting a ball or a picture. If talent is considered a barrier to entry, then all of the Ricardian rents accruing to managerial advantage are monopoly returns. While such treatment is not unreasonable, it is inconsistent with the standard approach to competition and infra-marginal rents of neoclassical microeconomics.

Although only 62 percent of the industry categories were regarded as competitive by the panel, 77 percent of the Australian fortunes originated in competitive industries because the industries which more frequently generated fortunes, such as property development, sheep stations, clothing manufacturing, diversified investing, automobile dealers, grocery retailing, and clothing retailing, were all (with the exception of one grocery retailing fortune) rated competitive by the panel. One must move down the list to the eighth ranked source of wealth, newspaper publishing, to find the first category judged non-competitive by the panel. The prevalence of competitively rated industries among the largest Australian fortunes does not depend on when the fortune originated, or on whether it was inherited or self-made.

The predominance of competitive orgins is not unique to Australian fortunes. Seventy-three percent of the largest fortunes in Great Britain and 68 percent of the largest fortunes in the U.S. also originated in competitive industries. While the fraction of fortunes originating in competitive industries is high in Australia, the vast majority of fortunes in each country originated in competitive surroundings (Siegfried and Roberts, 1991; Blitz and Siegfried, 1992). The fact that *any* of the great fortunes in any of the countries originated in a competitive industry is what attracts our attention.

VII. The Role of Industrial Structure

Over three-quarters of Australia's largest fortunes originated in competitive industries, industries where above normal profit margins might be expected to erode before a vast accumulation of wealth can develop. On the surface, the results appear to contradict conventional economic theory.[17] There are at least three ways to reconcile our empirical findings with the theory of competition, however. Each is revealed by carefully considering precisely what models of competition predict about profits: that *expected* profits *on the margin* will be no larger than opportunity costs (or will equal "normal profits") when the market *attains equilibrium*.[18] The italicized qualifications produce the explanations.

First consider profit expectations. Investment decisions are directed by *ex ante* estimates of returns. *Ex post* realizations can differ from expectations due to the presence of risk and/or uncertainty. We observe the *ex post* wealth distribution. The rich lists contain some lucky individuals whose risk taking (continually) paid off. Some of these fortunes may represent no more than a normal return in view of the *ex ante* risk assumed by the investor. Although the fortunes we observe are few in number, they may represent their whole industries' return to investments undertaken by *many* hopeful players, most of whom received nothing in return for their venture. The losers are out of sight. The winners took all, and we observe only the winners.

[17]Our observation about competitive industries spawning a large proportion of the largest personal fortunes applies to closely-held firms. We do not have evidence bearing on the pattern of industrial structure that has fostered successful *firms* that had initially widely dispersed ownership.

[18]Since perfect competition is frequently articulated in a market with perfect information, no risk, and identical sellers, expected profits are always realized and returns at the margin do not differ from infra-marginal returns, leaving only disequilibrium to cause (short-run) differences in returns (across markets, but not across sellers within a market).

Television production, property development, mineral exploration, acting, bookmaking, professional golf, horse training, restaurants, tourist attractions, diversified investing and inventing fit this explanation, and are all sources of large Australian fortunes. Individuals entering such endeavors recognize that they will encounter great risk, and that most of them will fail. Nevertheless, they accept the risk because they know that occasionally a really big winner evolves. The lottery-type incentive spurs them on.

Second, consider the distinction between infra-marginal and marginal rents. A low-cost competitive seller can earn more than a normal return on investment because of the difference between its unusually low cost and the market price. Competitive market price is determined by the *least* efficient (highest cost) competitor. If business acumen or ownership of scarce strategic resources permits production at cost levels below the competitive price, long-run economic profits can be earned in a competitive industry.

Melvin Reder (1968) expanded on this idea, arguing that there will be greater dispersion in earnings (and correspondingly more very wealthy individuals) as the difference in the importance of higher ranked versus lower ranked performance grows. This difference is larger, according to Reder, where: (1) there is consensus as to what is superior quality service; (2) the scale of operations is greater; (3) there is a much greater return to a higher rather than a lower degree of aptitude (the "winner take all" game); (4) the variation in native talents of people is greater; and (5) it is difficult for training to reduce the gap between superior and ordinary performance.

Salesmanship is a talent where there is consensus as to what is good performance (closing the deal), where the marginal return to a higher degree of aptitude is substantial (since a slight advantage in salesmanship makes the difference between all of the sale or none of the sale), where there is variation in natural talent, and where (arguably) it is difficult to close the talent gap through training. Add to this the opportunity to apply this advantage to a large scale of cperation and we have an explanation for the many fortunes (more than a dozen) generated in Australian chain-store retailing.

Infra-marginal rents are not unique to retailing, however. Agricultural productivity depends on soil fertility and rainfall, both of which vary enormously by location in Australia. Selling insurance, real estate and stocks, as well as wholesale trading are essentially salesmanship. Golf, horse training, and acting are difficult to learn, winner-take-all propositions with large variations in native talent.

Finally, short-run disequilibrium profits are not only possible in competitive markets, they are the raison d'etre of efficient resource allocation. It is short-run extraordinary profits that attract entry, thus moving resources to those activities where their value is greatest relative to their opportunity cost. If there are substantial lags in recognizing and reacting to shifts in demand, existing or "first-in" suppliers (the "pioneering brand" or "first-mover" advantage) may be able to accumulate large sums of wealth before market adjustment erodes their temporary advantage.

A number of the Australian fortunes accrued to individuals who first recognized a future opportunity. Those pastoralists who first crossed the Blue Mountains in New South Wales spent almost all their crop receipts on shipping until rail lines penetrated further inland and relieved them of their most formidable expense (Blainey, 1983), increasing their profits. Inventors Ralph Sarich (rotary engine) and Robert Ling (rotary clothesline) had a vision surpassing that of others, and few people other than Sir Peter Abeles anticipated the intensity of demand for overnight delivery of letters and small packages when he initiated TNT.

Some fortunes which seem to have benefitted from disequilibrium may have more to do with luck than vision. Many Australian property developers who were highly leveraged when inflation unexpectedly accelerated in the late 1960s enjoyed a decline in the real value of their debt denominated in nominal values, thus boosting their net worth substantially. Many of the real estate fortunes can be traced to (often-government-induced) disequilibrium situations.

Not all of the fortunes derived from competitive industries, in which case there is no need to appeal to the above arguments for consistency with economic theory. Newspapers account for only 5.5 of the 263 fortunes, but they are some of the largest (Murdoch, Packer, Fairfax) and were classified by the panel as non-competitive. Prior to the expansion of broadcast media and more recent technological advancements in printing, the newspaper business had many of the characteristics of a natural monopoly—large scale economies and inelastic demand for both advertising and circulation—and escaped public regulation largely out of deference to press freedom. Thus it is not surprising that many newspaper owners reaped great financial rewards. Publishing is well represented among the fortunes of the U.S. and Great Britain, as well as Australia.

It is also possible that our panel mistakenly classified some non-competitive industries as competitive. There is reason to be concerned about bias in the ratings, but the likely bias, in our view, is toward rating truly competitive industries as non-competitive. Unswerving devotion to a competitive market model might tempt one to conclude, *on the basis of the existence of the fortunes themselves*, that monopoly power must lurk somewhere in their history. The panel knew that the industries they were asked to classify had generated large fortunes. However, if anything, such bias would tend to *understate* the fortunes emanating from competitive industries.

VIII. Conclusion

The large Australian fortunes of 1990 arose from a variety of different industries, many of which are expected (pastoralists, mineral exploration, newspapers, property development, construction) and some of which are not (retailing women's clothing, wholesaling housewares, accounting, and washing cars). It is the frequency of competitive industries as fortune-makers, however, that is most unexpected. Over three-quarters of the fortunes originated in businesses that a panel of experts judged to be competitive at the time the fortune began to accumulate. How could such tremendous wealth be amassed in industries in which extraordinary earnings should attract new entrants and erode margins? We have identified three important explanations: (1) risk and uncertainty; (2) returns to business acumen and strategic resources; and (3) market disequilibria. Alone or together these three explanations can account for most of the fortunes derived from competitive markets in Australia.

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