

HOME-BASED WORK: AN EMPIRICAL ASSESSMENT



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The role of the residence as a locus for economic activity continues to evolve as society changes its modes of production, reproduction and consumption. The level and nature of home-based work in two contrasting Melbourne suburbs is examined.

CONTEXT

In the transition to an informational society, countries such as Australia are providing opportunities for the emergence of new patterns of living and working.¹ The major changes in settlement patterns throughout human history have resulted from technological changes and their translation, via new transportation and communications systems, planning systems, work systems and so on into new sets of space relations. This is particularly obvious when the focus is upon key societal epochs and their stereotypical characteristics.

Pre-industrial

The development of tools for agriculture enabled the first permanent settlements and the development of towns. For protection, the settlements were concentrated and often contained within walls, with primary production occurring in the surrounding fields. Movement was by foot and the spatial scale of development was influenced by the distance and time taken to move within the town or to walk to work in the fields. Secondary and service activities were conducted within the settlement and often as cottage industries. In a residential sense the urban form was essentially contained, but it was dispersed in terms of the bulk of employment location. Infrastructure networks were minimal.

Industrial

The industrial revolution caused a major change in urban scale, form, activities and lifestyle, and consequently in settlement patterns. The substitution of mechanical force and fossil energies for human labour and craftsmanship led to mass production of goods, and a centralised concentration of production activities. There were also changes in employment conditions to formal or rigid employment practices. As well as this the new mode of production led to the need for systems of mass transport to bring labour to the new concentrations of activity. Rail transport enabled the growth of larger cities, and their suburbs. Employment was concentrated in the city core and residential areas were more dispersed. The city was essentially single centred with radial, fixed rail transport, reinforcing the concentration of employment in the core.

Informational

The development of telecommunications, information technologies and fast transport, and the shift to an information economy, is producing further changes in the scale, and form of cities including reversal of certain previous trends. Industries, particularly manufacturing, are moving to the suburbs for increased space and access to arterial roads, freeways and interstate highway networks, and to component suppliers and low income labour.

Services, particularly consumer services, are expanding and following people into the suburbs, and retail activities are going with them to the suburbs. Back offices of larger companies are also moving to cheaper space and less congested roads and streets in suburban areas. Some activities, such as producer services are concentrating in the cores of the major cities, as are major corporate headquarters and offices of overseas firms.

Only about 30 per cent or less of jobs remain in the central city and these jobs are increasingly in corporate centres, producer services or personal services — and government. In these central urban cores the numbers of managers, professionals and para-professionals (and women workers) are increasing and other occupational groups are decreasing.²

Though the proportion of jobs remaining in the central city is declining, incomes are highest in the central city and reduce with distance from it. A small and declining proportion of jobs is therefore well served by the existing radial rail transport system. Greatest rail use is by central city workers who live in the inner and middle suburbs.

Suburban jobs have lower incomes and are less well served by public transport; public transport caters for less than 10 per cent of trips with destinations in the suburbs. Private transport, particularly car travel, is filling this void. Employment arrangements are increasingly informal or flexible — including flexi-time, part-time and casual employment, self-employment, and various contractual arrangements. Faster private transport and flexible working hours are enabling longer trips and further dispersal of activities. Telecommuting would further facilitate this trend. The increase in information-

based service employment has facilitated the greater participation of women in the workforce.

Thus, each industrial transition has seen an increase in urban scale and population, a reversal of urban form and employment location, a change in the dominant transport mode, and a change in level of formality of employment conditions. These transitions are illustrated in Table 1.

HOME-BASED INDUSTRIES

A class of activity which is relatively difficult to 'map' clearly is **residence-based**. The range of economic activities capable of being undertaken within the home is extensive.³ They range from the routine and relatively unskilled activities such as clothing piecework, tele-marketing and the like to the non-routine and highly skilled jobs such as writing, software development, consulting and so on. They include people working from their own homes (for varying periods of time) as well as people working in businesses which have been established in property originally designed for residential purposes and located in areas zoned as residential (e.g. photographer, dentist, doctor, physiotherapist).

Key contributors of residence-based work include the following:

- (1) A rapid growth of computer and communications infrastructure (CCI) that is penetrating beyond traditional business organisations into the home. This is accelerating as a result of the price and performance characteristics of key components of that infrastructure such as PCs, software, modems, network services, as well as the human capital inputs such as CCI support services and an increasingly computer-literate population.
- (2) Societal changes in family structures, driven in part by the economic

Table 1: Transition to an Information Society

	Societal transitions		
	Agriculture →	Industrial →	Informational
Industry location	Dispersed	Centralised	Centralised with decentralisation
Industrial process	Handicraft	Mass production	Flexible specialisation
Economic engine	Human muscle	Machines	Human knowledge
Product	Customised	Uniform	Personalised
Market force	Demand led	Supply led	Demand led
Work conditions	Informal	Formal	Team
Dominant mode of interaction and type of information transfer at work	Face-to-face	Hierarchical line management	Information networks
	Verbal	Paper	Electronic
Market orientation	Local	National	Global
Commuting pattern	Dispersed	Focussed	Dispersed
Transport network mode	Minimal grid/ribbon private, walk	Radial public, rail	Extensive grid private, car
Planning paradigm	Feudal	Prescriptive planning/zoning	Performance-based planning

necessity of two incomes.⁴ Furthermore, the demands of child-rearing can be accommodated in part by family members undertaking a variety of routine and non-routine economic activities within the home.

(3) A gradual shift in employers' attitude towards telecommuting and telework for particular classes of employee. Recent studies in Australia⁵ and overseas⁶ clearly point to a range of benefits for both industry and worker groups.

(4) An increasingly polarised population including a low income, poorly-educated segment operating in the

informal economy based out of their homes.

(5) A city planning code which is becoming less formal and prescriptive than in the past and based more on performance attributes, such as: impact on privacy, noise, traffic generation and so on. Most home-based activities can operate successfully without detracting from the residential amenity of an area.

Little empirical data exist on the class of economic activity based in homes and residential properties, despite its increasing significance in the informational economy. One of the few studies undertaken to date has been by

the Australian Bureau of Statistics in 1992, although their focus was only on those who worked in their own residential property.

The number of persons classed as working from home within Australia in this study was 2.04 million. This constitutes 26.5 per cent of the population aged over 15.⁷ The profile of this group of home-based workers is as follows:

- 4.0 per cent were employed at home, that is, they worked more hours at home than elsewhere. The number and percentage of persons employed at home has increased since 1989, when 3.5 per cent were classed as primarily home-based workers.

- 19.3 per cent worked at home, but for less hours than they worked elsewhere.

- 3.2 per cent comprised farmers as well as persons working fewer than one hour at home.

These figures are likely to be an under-estimate of the percentage of the population associated in one way or another with residence-based work, due to the fact that the population (denominator) used by ABS includes teenagers over 15 as well as persons aged over 65 (in both cases not highly represented in the workforce). Also, the study did not canvass properties in residentially zoned areas which were workplaces but no longer homes.

The demographic characteristics of the class of worker who spends most of their time at home (that is the group representing 4.0 per cent of all persons aged over 15 years) were found by the survey to be as follows:

- of persons employed at home who were married (i.e., husband or wife), 57 per cent had children aged 0 to 14 present (the proportion of all married employed persons who had children aged 0 to 14 years present was 51 per cent);

- the largest occupation group for persons employed at home was clerks (39 per cent), with the great majority being female (113,400 females and 7,600 males). There were greater numbers of males employed at home than females in the occupation groups of managers and administrators, professionals and tradespersons;

- the industries with the highest number of persons employed at home were wholesale and retail trade (54,100 persons), and finance, property and business services (61,800 persons);

- slightly more than half (52 per cent or 161,100 persons) of those employed at home were self-employed/ or unpaid family helpers, while another 37 per cent (112,400 persons) were employees;

- the most common reason for beginning work at home was 'to open/ operate own/family business (with spouse)'. This was given as the reason by 26 per cent of persons employed at home. Other common reasons were 'wanted office at home/no overheads/no rent' (16 per cent), 'children too young/ preferred to look after children' (16 per cent) and 'other' (16 per cent);

- two-thirds of persons employed at home (206,500) usually worked less than 35 hours a week at home. An estimated 82,200 persons worked 40 hours and over at home. Some 43 per cent of males employed at home worked 40 hours and over compared with 18 per cent of females.

A TALE OF TWO SUBURBS: HOME-BASED WORK IN MELBOURNE

Two Melbourne suburbs with contrasting socio-economic profiles, Box Hill and Coburg were selected for an examination of their level of residence-based commercial activity (see Table 2). Entries from Telecom's Yellow Pages

Table 2. Socio-economic Profile of Box Hill and Coburg Municipalities, 1991

	Per cent of persons with specified characteristic	
	Box Hill	Coburg
Tertiary education	5.3	3.4
Employed part time	14.7	10.5
Employed full time	37.1	32.9
Unemployed seeking work	5.9	8.3
Employed in manufacturing	12.3	20.2
Employed in finance, property, business	16.1	10.1
Employed in community services	23.9	17.9
Managers, administrators	10.6	6.4
Professionals	21.3	12.1
Para professionals	8.4	6.5
Tradespersons	11.2	14.4
Clerks	16.7	16.3
Sales and service	14.0	12.2
Plant operators	3.8	10.1
Labourers etc	8.2	13.8
Worked at home	3.6	2.2
Personal income > \$30,000	19.6	10.2
Mean sale price of houses (\$)	150,000	115,000

Source: CDATA 91 and Valuer General's Department for house price data

business directory represented the major source of data for this study. Geographic Information Systems (GIS) procedures were employed for the following tasks:

- (1) geocoding each commercial establishment (of which there were 1187 in Box Hill and 913 in Coburg)
- (2) overlaying this distribution with the land use zones which are employed by the Planning Departments in each municipality (see Figures 1 and 2).

Table 3: Distribution of Yellow Pages businesses in Box Hill and Coburg telephone areas

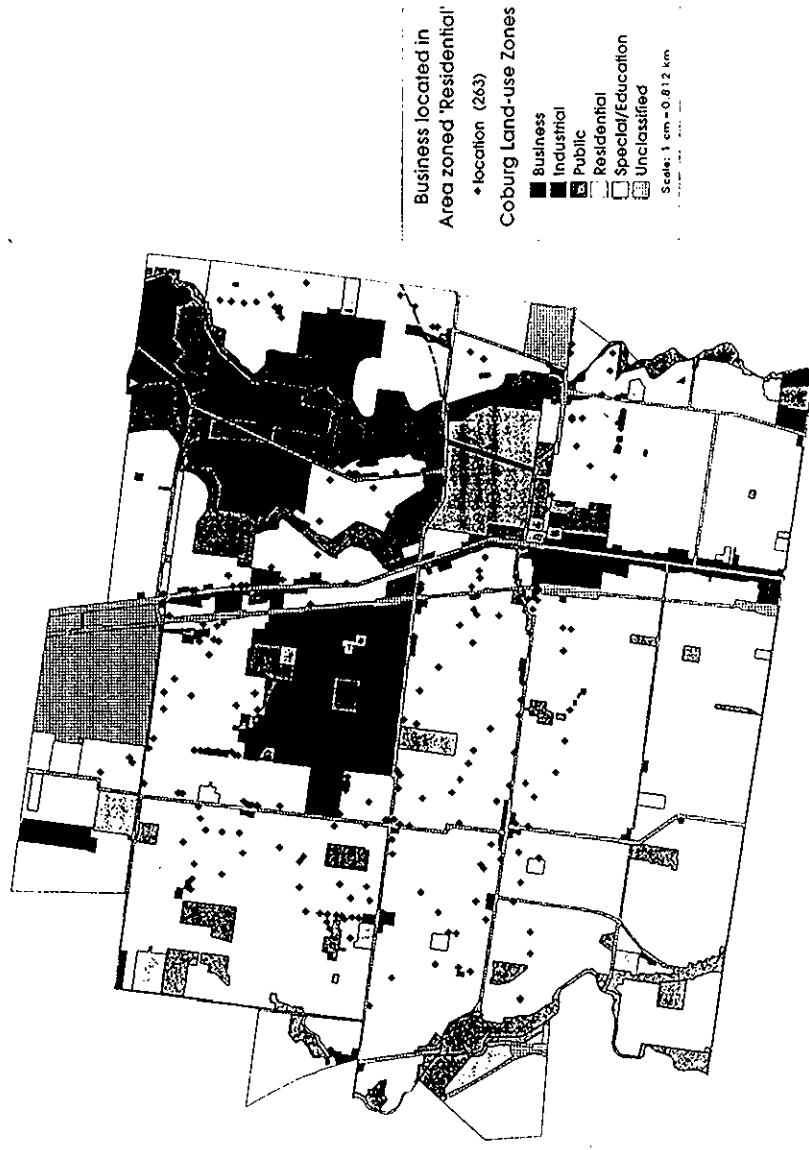
Land use zone	Box Hill businesses		Coburg businesses	
	No.	%	No.	%
Commercial/Industrial	304	25.6	429	47.0
Residential	545	45.9	263	28.8
Unclassified	333	28.5	221	24.2
Total	1,187	100.0	913	100.0

Figures 1 and 2 indicate the significant number of commercial establishments in each suburb that are clearly located in residential areas. Table 3 quantifies the level of what can be classed as 'residence-based' commercial activity.

Figure 1: Box Hill land-use zones and businesses located in area zoned 'Residential'



Figure 2: Coburg land-use zones and businesses located in area zoned 'Residential'



In this exercise, combining a GIS layer of geocoded business addresses (i.e. street addresses converted to map positions) with a layer containing land-use zoning has resulted in a number of points being 'unclassified'. This arose from the fact that the road reservations were digitised to property boundaries whereas the addresses were geocoded to road centrelines (ie centre of road reservations). A more accurate (but costly) approach for future work would be to ensure geocoded addresses fell totally within property (and hence land-use zoning) boundaries.

Taking the most conservative perspective that all business establishments deemed 'unclassified' were located in areas zoned commercial or industrial means that in Box Hill, almost half of all commercial activity appears to be 'residence-based', while in Coburg, the proportion is approximately one in three (again, see Table 3).

Data on the nature of the business undertaken at each address reveal a number of interesting contrasts between the two areas. In both suburbs, 'selling from home' is a key activity. In all other sectors, Box Hill is clearly dominant — in construction, health services, property, business and financial services as well as personal and community services. There is clear evidence of an

entrepreneurial (if not innovative) milieu in Box Hill that far exceeds that represented by the residents in Coburg. Why this is so, and the extent to which further differentiation may be possible in relation to activities such as telework, necessitates recourse to household surveys. It is via such surveys that we will gain a clearer perspective on the types of households and businesses which are finding that a residential environment represents the most appropriate setting for their business activities in the 1990s and beyond.

References

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