

# SOCIO-ECONOMIC ASPECTS OF CIGARETTE SMOKING IN MALTA AND GOZO

Douglas G. Lockhart

Questions on smoking behaviour were included in the Census of Population and Housing taken in November 1985. Information was gathered on the number of cigarettes consumed by smokers, those who had stopped smoking and those who had never smoked. Since the Census, smoking has figured prominently in Maltese newspapers and the Health Education Unit has been active in publicising the health hazards associated with tobacco dependence. Nevertheless relatively little research has been done on patterns of cigarette smoking and on the demographic, socio-economic and environmental factors that may go some way towards explaining the sharp variations in cigarette addiction within Malta and Gozo. This paper explores a number of these underlying dimensions and using a simple statistical index identi-

fies those neighbourhoods which have high, about average and low levels of smoking behaviour.

## INCIDENCE OF CIGARETTE SMOKING

A total of 61891 persons, 24.4 per cent of the population aged 16 years and over indicated that they were regular smokers at the 1985 Census. A further 14273 (5.6%) declared that they had stopped smoking, while the remaining 178033 (70%) claimed that they had never smoked. In short, almost one-third of the adult population are or have been exposed to the health risks associated with smoking.

There are however, marked differences in smoking habits between the sexes. Almost

40 per cent of adult men were still smoking, while the corresponding figure for women was just 10.2 per cent. Moreover, 9.3 per cent of men indicated that they formerly smoked regularly whereas only 2.2 per cent of women had given up cigarettes.

## AGE-SEX CHARACTERISTICS OF CURRENT SMOKERS

Smoking is a habit common in all age-sex categories, but to varying degrees of intensity (Tables 1A and 1B). Among men the incidence of smoking and the number of cigarettes smoked is heaviest in the 30-59 age group. A second point is that the proportion of light smokers is negatively correlated with ageing. Thirdly, cigarette smoking is less popular among Gozitans of all age groups compared with their counterparts in Malta.

The proportion of women smokers is appreciably lower and in Gozo fewer than 1 in 20 women have ever smoked. In Malta, there is some evidence that smoking among women is becoming more popular. Lastly, only a very small percentage of women aged 60 and over were smoking in 1985.

## EMPLOYMENT AND SMOKING HABITS

Since information on cigarette smoking was gathered as part of the Population Census, it is possible to cross-tabulate smoking habits with a wide range of socio-economic and household characteristics. Themes which are covered by the Census include employment, wage levels, household size, tenure and geographical mobility. Space here permits analysis of only a few of the many possible relationships, however of these employment was one of the most useful diagnostic variables. Tables 2A and 2B provide a detailed breakdown of the smoking habits of men and women in six occupational groupings. These suggest that cigarette smoking is particularly popular among four groups of male workers: employers, the self-employed (own-account workers) and blue collar jobs represented by the skilled/semi-skilled and the unskilled categories (Fig 1). It is also noticeable that the proportion of medium and heavy smokers is also greatest in these employment groups.

*Douglas G. Lockhart,  
Lecturer in Geography,  
University of Keele,  
Staffordshire, U.K.*

**Table 1 A**

Table 1A Smoking patterns of adult men by age group (%)

Age groups	16-29		30-59		60 and over	
	Malta	Gozo	Malta	Gozo	Malta	Gozo
Never smoked	61.6	67.7	45.0	46.3	43.0	59.9
Stopped smoking	3.2	2.7	9.5	8.4	17.8	15.9
Smoking 2-10 cigarettes/day	8.5	8.5	6.9	7.6	5.9	8.9
Smoking 11-20 cigarettes/day	17.4	15.2	19.1	18.1	13.9	11.1
Smoking 21 or more cigarettes/day	8.9	5.9	19.5	11.3	9.9	4.3

Source: The source for the tables in this paper are unpublished data supplied by the Central Office of Statistics, Valletta

**Table 1 B**

Table 1B Smoking patterns of adult women by age group (%)

Age groups	16-29		30-59		60 and over	
	Malta	Gozo	Malta	Gozo	Malta	Gozo
Never smoked	81.5	96.1	86.0	96.6	96.1	99.4
Stopped smoking	2.6	0.6	2.6	0.6	1.3	0.1
Smoking 2-10 cigarettes/day	8.8	2.1	5.3	1.5	1.2	0.2
Smoking 11-20 cigarettes/day	6.0	1.1	4.8	1.1	1.0	0.1
Smoking 21 or more cigarettes/day	1.1	0.1	1.4	0.2	0.3	0.1

**Table 2 A**

Table 2A Smoking patterns of men by employment in Malta and Gozo

	never smoked	stopped smoking	smoking (cigarettes/day)		
			2-10	11-20	21 or more
employer	1034 44 (49.6)	227 4 (10.6)	144 7 (6.9)	321 8 (15.1)	361 25 (17.7)
own account	4246 517 (49.0)	681 85 (7.9)	627 82 (7.3)	1654 168 (18.7)	1547 111 (17.1)
professional, technical, managerial & administrative	5826 332 (57.7)	1014 41 (9.9)	767 31 (7.5)	1483 68 (14.5)	1086 26 (10.4)
executive & clerical	7309 317 (55.0)	1071 31 (8.0)	1074 42 (8.1)	2253 71 (16.8)	1658 32 (12.2)
skilled & semi-skilled	12899 550 (46.1)	2162 67 (7.6)	2112 74 (7.5)	5764 199 (20.5)	5211 105 (18.2)
unskilled	5892 627 (43.1)	872 107 (6.5)	953 112 (7.0)	3016 260 (21.6)	3113 273 (22.4)

Note: 1 Actual values as well as percentages appear in this table and Table 2B because many of the crosstabulations produced small cell counts.

2 Each cell contains: Malta count (average percentage)  
Gozo count

**Table 2 B**

Table 2B Smoking patterns of women by employment in Malta and Gozo

	never smoked	stopped smoking	smoking (cigarettes/day)		
			2-10	11-20	21 or more
employer	124 11 (77.1)	2 0 (1.1)	13 2 (8.6)	10 0 (5.7)	12 1 (7.4)
own account	791 119 (86.3)	18 1 (1.8)	55 5 (5.7)	45 1 (4.4)	17 2 (1.8)
professional, technical, managerial & administrative	2361 220 (86.7)	79 2 (2.7)	174 6 (6.0)	102 2 (3.5)	30 0 (1.0)
executive & clerical	5139 262 (82.5)	144 3 (2.3)	479 8 (7.5)	345 5 (5.4)	80 0 (1.2)
skilled & semi-skilled	6103 386 (82.1)	159 2 (2.0)	700 10 (9.0)	447 5 (5.7)	87 1 (1.1)
unskilled	4953 481 (84.3)	87 2 (1.4)	447 7 (7.0)	368 8 (5.8)	95 1 (1.5)

Moreover, relatively few manual workers give up smoking (Fig 2).

Differences between the smoking habits of working women are less obvious. Three groups are slightly heavier smokers: employers, skilled/semi-skilled and unskilled workers. In all employment categories there was a fairly even division between light smokers (up to 10 cigarettes/day) and those smoking about double that amount. In proportional terms, only women employers appear to be prone to heavy levels of addiction.

**CIGARETTE SMOKING BY LOCALITY OF RESIDENCE**

Data on cigarette smoking habits are available for the 50 Census localities in Malta and 14 in Gozo, one of which, Ghajnsielem, includes the tiny residual population on Comino. These statistical areas were grouped into six regions, five in Malta with Gozo and Comino forming the sixth region.

The location of high and low consumption regions is similar among males and females in Malta and although the male residents of Gozo do smoke less than their Maltese counterparts, the greatest difference is the very low incidence of smoking among Gozitan women. In general, rates are highest for both men and women in the urban area centred on Valletta and the Three Cities, in many of the working class suburbs and in newer residential areas on the fringe of the Harbour Regions. The commuter villages of South East Malta, with only a few exceptions, also tend to have high rates of consumption. In contrast, Northern and Western Malta together with Gozo are regions where non-smokers and light smokers are in a majority in virtually every locality.

A number of these trends were mapped and published in Volume III of the Census of Population (1), however it was felt that an index of smoking practice could provide a useful summary of differences at locality level. Six diagnostic variables were se-

lected (Table 3) and for each variable the locality which displayed the lowest proportion of smokers or the least consumption pattern was awarded rank 1 and the next lowest was given rank 2 and so on. The index was calculated using the formula:

$$I = 100. \left( \frac{R}{N.C} \right)$$

Where R is the individual rank score  
N is the number of variables  
and C is the number of geographical areas.

At the locality level the index ranges from 3.9 Ghasri (the best) to 96.1 Senglea (the worst) (Table 4 and Fig 3). The regional scores are based on the average values of their constituent localities and range from 17.4 Gozo and Comino (the best) to 72.7 Inner Harbour (the worst) (Table 5).

High scores are characteristic of the Inner Harbour Region as a whole. Even here there is a marked peak in The Three Cities and the adjacent localities of Marsa and Kalkara. Values about the average for Malta can be found in Sliema and Guardamangia. The Outer Harbour and South Eastern Regions both contain some localities with quite high scores (Zabbar, San Gwann, Birzebbugia) and a number of districts which have lower levels of addiction (Qormi, Marsaxlokk, Mqabba). The localities of Western and Northern Regions form the bulk of areas of low addiction within Malta. However, there are some exceptions, notably Gharghur, Mosta and Naxxar which have above average values. Gozo is characterised by low scores. Here too there are variations with the western parishes recording somewhat lower levels than Victoria, Nadur and Ghajnsielem.

The explanation for these patterns is complex and no doubt is related to many factors including employment, age structure and geographical location which have been discussed in this paper.

It would be intriguing to know what influence different life- styles, friendship patterns, spending profiles and adolescent experiences in the home and at school have upon smoking behaviour. This would involve interviewing a representative sample of the population in different localities. Instead it was decided to compare the smoking index values with a measure of the level of living in each of the census areas.

The level of living index is based upon over thirty measures of demographic, economic and household structure together with data on housing tenure and amenities. (2) The values were mapped in the same way as the smoking index (see Hyphen (1989) vol 6 (1) pp 1-7). Table 6 compares the relative position of each locality in relation to both indices. The pattern which emerges is not a simple correlation between high levels of

Fig 1

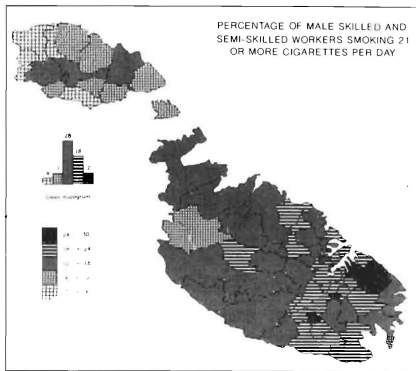


Fig 2

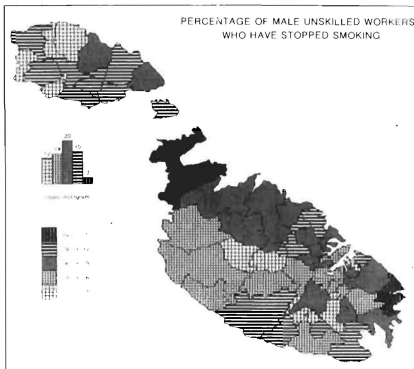
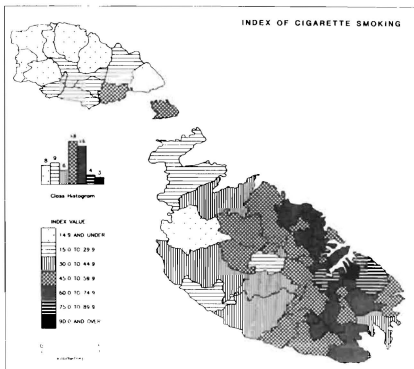


Fig 3



addiction and poor quality of life associated with inner-city living conditions on the one hand and substantially lower consumption patterns and suburban prosperity on the other. Certainly, The Three Cities and many of the working class neighbourhoods adjacent the industrial areas do indeed have a poor record on the quality of life indicators and a heavy dependence upon cigarettes (Senglea, Cospicua, Marsa). Some such as Kalkara and Msida although enjoying a better level of living share smoking patterns that are very similar to their

less well-off neighbours. The greatest deviations within the urban area however, occur in the more modern suburbs. In this respect, government housing estates (Santa Lucia, Ta'Xbiex, San Gwann) characterised by young economically-active populations enjoying high standards of living are among the communities whose implied health risks from smoking are greatest. Localities with a mixture of government estates and recent private housing development are also high risk areas (Fgura, St. Julians). Indeed much of suburban Malta and villages in the South East fare badly and are skewed towards a greater degree of smoking than one might expect (Santa Venera, Kirkop, Safi).

In contrast, a belt of localities stretching from Melliha and Mgarr through western Malta to Mqabba and Qrendi in the South East are characterised by comparatively poor levels of living and moderate amounts of cigarette addiction. Finally, differences between the two indices are consistently greatest in Gozo owing to the generally poor quality of life throughout the island and the lighter smoking habits of much of the population.

CONCLUSIONS

Data from the 1985 Census confirm the very marked differentiation in smoking practice among the Maltese population. The variables discussed in this paper point to the existence of a number of fascinating variations between men and women, by age group, between white collar and blue collar occupations and from one region and even one locality to the next. Among the most striking features are the high levels of addiction in the working-class population in inner-urban areas, the tendency for above average levels of addiction to be prevalent in new and expanding neighbourhoods and the increasing trend towards smoking among young women. However, undoubtedly the greatest contrast is the almost north-south divide between a rural/low density population who are light smokers and the urban and suburban communities where smoking is much more a way of life.

Accurate data on the nature of smoking behaviour is of course an important requirement if health educational initiatives are to be effective. It is hoped that the information provided by the Census will be used to target those groups who are most at risk such as school leavers and the young residents of inner-urban areas. Mapping relationships between cigarette smoking habits and socio-economic variables demonstrates the value of a geographical perspective because it answers vital questions such as who are Malta's smoking population, where do they live and what are their household and occupational characteristics.

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Table 3

Table 3 The indicants of cigarette smoking in Malta and Gozo

- 1 Male smokers
- 2 Female smokers
- 3 Males who have never smoked
- 4 Females who have never smoked
- 5 Males smoking 2-10 cigarettes per day
- 6 Males smoking 21 or more cigarettes per day

Table 5

Table 5 Levels of cigarette smoking in the Census regions

	Average index value	Average rank
Inner Harbour	72.7	51.3
Outer Harbour	61.9	42.3
South Eastern	59.7	40.1
Western	36.5	19.6
Northern	42.6	25.2
Gozo and Comino	17.4	9.0
Malta	58.5	39.0
Malta, Gozo and Comino	49.5	32.4

Table 4

Table 4 Levels of cigarette smoking in the Census regions and localities

INNER HARBOUR	Index value	Rank	SOUTH EASTERN	Index value	Rank	GOZO AND COMINO	Index value	Rank
Cospicua	95.8	63	Birzebbugia	68.8	52	Fontana	19.8	10
Floriana	72.7	57	Ghaxaq	56.0	35	Ghajnsielem (b)	48.4	26
Guardamangia	55.2	33	Gudja	60.4	42	Gharb	7.8	2
Gzira	67.7	50	Kirkop	72.1	55	Ghasri	3.9	1
Hamrun	63.0	45	Marsascala	53.6	31	Kercem	11.2	6
Kalkara	81.0	60	Marsaxlokk	43.5	22	Munxar	21.9	13
Marsa	81.3	61	Mqabba	47.1	25	Nadur	27.9	16
Msida	64.8	48	Qrendi	57.0	37	Qala	8.6	4
Paola	64.3	46	Safi	68.0	51	San Lawrenz	8.3	3
Pieta	59.4	38	Zejtun	70.3	53	Sannat	18.8	9
Santa Lucia	71.1	54	Zurrieq	59.4	38	Victoria	23.4	14
Senglea	96.1	64				Xaghra	10.9	5
Sliema	54.9	32	WESTERN			Xewkija	19.8	10
Valletta	65.9	49	Attard	25.3	15	Zebbug	13.0	7
Vittoriosa	93.5	62	Balzan	37.8	20			
Ta'Xbiex	76.6	58	Dingli	21.1	12			
OUTER HARBOUR			Lija	46.9	24			
Birkirkara	56.3	36	Mdina	51.6	28			
Fgura	72.4	56	Rabat	35.2	19			
Luqa (a)	48.4	26	Siggiewi	30.7	18			
Qormi	55.2	33	Zebbug	43.0	21			
San Gwann	64.6	47						
St Julians	60.7	43	NORTHERN					
Santa Venera	59.9	41	Gharghur	61.7	44			
Tarxien	59.6	40	Mellieha	29.9	17			
Zabbar	79.9	59	Mgarr	14.1	8			
			Mosta	53.1	30			
			Naxxar	52.9	29			
			St Paul's Bay	44.0	23			

Notes: a The existence of the St Vincent de Paule home for the elderly is likely to have influenced the value for Luqa  
 b includes Comino which has a population of about seven persons

Table 6

Table 6 Comparison between the level of living index and the smoking index for localities in Malta and Gozo

INNER HARBOUR	Difference in rank	SOUTH EASTERN	Difference in rank	GOZO AND COMINO	Difference in rank
Cospicua	- 8	Birzebbugia	-19	Fontana	+39
Floriana	- 6	Ghaxaq	- 3	Ghajnsielem	+24
Guardamangia	-14	Gudja	-22	Gharb	+55
Gzira	-20	Kirkop	-24	Ghasri	+53
Hamrun	+ 2	Marsascala	-22	Kercem	+46
Kalkara	-23	Marsaxlokk	- 7	Munxar	+46
Marsa	- 3	Mqabba	+15	Nadur	+44
Msida	-24	Qrendi	+11	Qala	+60
Paola	- 4	Safi	-37	San Lawrenz	+42
Pieta	-13	Zejtun	-14	Sannat	+34
Santa Lucia	-53	Zurrieq	- 9	Victoria	+22
Senglea	- 1			Xaghra	+51
Sliema	+ 3	WESTERN		Xewkija	+52
Valletta	+12	Attard	-12	Zebbug	+45
Vittoriosa	-16	Balzan	-13		
Ta'Xbiex	-53	Dingli	+ 9		
OUTER HARBOUR		Lija	-13		
Birkirkara	-20	Mdina	+10		
Fgura	-52	Rabat	+21		
Luqa	+18	Siggiewi	+ 5		
Qormi	- 4	Zebbug	+ 1		
San Gwann	-45				
St Julians	-35	NORTHERN			
Santa Venera	-29	Gharghur	-26		
Tarxien	-27	Mellieha	+ 9		
Zabbar	-31	Mgarr	+26		
		Mosta	-20		
		Naxxar	-23		
		St Paul's Bay	- 6		

Note: Positive differences occur where the level of living index exceeds the smoking index and negative differences arise where the rank of the smoking index is the greater.

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