CHAPTER III

DETERMINANTS OF GOVERNMENT EXPENDITURES

The nineteenth century saw the rapid expansion of government expenditures in the Western European countries. The growth of government expenditures has been going on at an even faster rate since the Second World War. This tremendous growth of government expenditures has induced many economists to try to find out what are the determinants of these government expenditures. In this chapter we shall examine some hypotheses which attempt to explain the growth of government expenditures.

Wagner's Law

One of the most famous hypotheses was postulated by the German political economist Adolph Wagner (1835-1917). Wagner believed that there was a functional relation between the growth of an economy and the relative growth of its public sector. From this it then followed that there was a functional relation between the growth of an economy and government expenditures. Wagner believed that this was the inherrent characteristic of an economy in the process of industrialisation. In brief Wagner's Law states that as per capita income and output increase in a nation in the process of industrialisation, the public sector necessarily grows in proportion to total economic activity.

Wagner derived his law from an empirical study of the growth of government expenditures in countries such as England, France, Germany, United States as well as Japan in the nineteenth century. The statistics available to him showed that there was such a functional relation between government expenditures and the growth of economic activities. But Wagner also buttressed his statistics with theoretical argument, the core of which runs as follows:

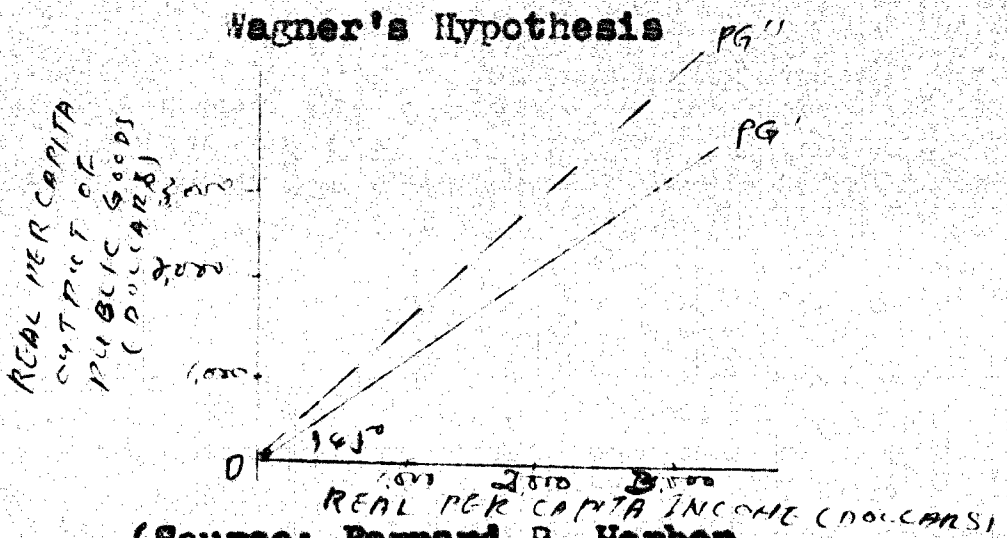
"The Law (of increasing state activities) is the result of empirical observation in progressive countries, at least in the Western European civilisation; its explanation, justification and cause is the pressure of social progress and the resulting changes in the relative spheres of private and public economy, especially compulsory public economy. Financial stringency may hamper the expansion of state activities, causing their extent to be conditioned by revenue rather than the other way round, as is more usual.

But in the long run the desire for development of a progressive people will always overcome these financial difficulties."[1]

Wagner's Law is illustrated graphically in Figure 3.1. In Figure 3.1., real per capita output of public goods is measured on the vertical axis and real per capita income on the horizontal axis. It is implicitly assumed that the growth both in real per capita output of public goods and real per capita income take place over an extended period of time. The 45 line PG' shows a situation where the public sector maintains a constant proportion of total economic production (GNP) of the society over time. This is because along PG' the ratio of real per capita output of public goods to real per capita income is constant.

Figure 3.1

Wagner's Hypothesis



(Source: Bernard P. Herber, Modern Public Finance, Richard D. Irwin, Inc., 1967, Page 147)

Using the 45 line PG' as a reference point The Wagner Hypothesis depicted by line PG". Along line PG" the proportion of resources devoted to the production of public goods increases over time, which means that real per capita output of public goods increases at a faster rate than real per capita income.

The Wagner Hypothesis can also be formulated in terms of the elasticity concept. Defining elasticity of

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[1]Quoted by Alan T. Peacock and Jack Wiseman, The Growth of Public Expenditure in the United Kingdom, London: Oxford University Press, 1961.

public sector production as the following ratio,

$$\frac{\text{percentage increase in real per capita output of public goods}}{\text{percentage increase in real per capita income}}$$

then according to the Wagner Hypothesis, this ratio is greater than unity. This means that real per capita output of public goods increases more than proportionately to an increase in real per capita income.

Wagner divided public expenditures into two broad categories: expenditures for internal and external security and expenditures for culture and welfare. The latter included expenditures on health, education, culture, welfare as well as expenditures for different economic functions such as transportation and communications. According to Wagner both categories of expenditures would increase at a faster rate than total output, but for different reasons.

Expenditures for external security would increase in a growing economy for two reasons. Firstly the nature of the use of force by the state changed from simple agreesion to prevention of attack by others. Secondly the army would increasingly use more capital equipment as the techniques of warfare became more complex. As for internal security more expenditures would be required to maintain law and order because there would be increasing friction between economic units and between people as urbanisation and industrialisation took place. Moreover economic growth would increase division of labour which would multiply the complexities of economic life and hence the possible causes of friction.

Expenditures on culture and welfare would increase because the public sector could produce these goods more effectively and more efficiently for three reasons. The public sector could produce goods and services of a higher quality than the private sector; it could raise more capital and administer larger economic units and it can avoid many of the market crises which beset private firms.

Thus Wagner argued that technical progress made public corporation the only alternative to the joint stock company, and he regarded this as a necessary and preferable alternative. In cases where technical development would give rise to monopolies, where social benefits could not be evaluated in terms of money and where public corporation could be a source of stability increasingly more public expenditures must necessarily arise. Moreover as the basic

physiological needs for food, shelter and clothings became satisfied people would begin to demand more and more services of a cultural and spiritual nature, especially those provided for by the public sector.

Critique of the Wagner Hypothesis

Although Wagner did not prove, either empirically or theoretically, that any type of public expenditure would be a function of national income he presented convincing arguments which showed that the absolute level of public expenditures in a growing economy would increase over time. However various criticisms can be made against this generalisation.

According to Herber "the Wagner Hypothesis deals with interdisciplinary phenomena though it is not interdisciplinary in its analytical framework."[2] By this Herber means that various disciplines such as political science, sociology and economics must be involved in any realistic theory of public expenditure. Even the cultural characteristics of the society must be taken into consideration. But the countries on which Wagner's empirical studies were based, were of diverse social and cultural background. Thus it is unlikely that the causal relations described by Wagner, which is economic in nature, constitutes the primary determinants of relatively expanding government expenditures. Thus this lack of a comprehensive analytical framework causes it to fall short in its explanation of historical facts.

Peacock and Wiseman criticise the Hypothesis on two grounds.[3] Firstly the Hypothesis is implicitly based on the organic theory of state which is not universally accepted. Wagner's proof of the existence of the "law" thus depends on the validity of the organic theory of state. In the final analysis the Hypothesis is really a hypothesis of increasing state activities. Secondly the secular nature of this hypothesis tends to overlook the time pattern or the actual process of public expenditure growth.

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[2]Bernard P. Herber, Modern Public Finance, Richard D. Irwin, Inc., 1967, Page 149.

[3]Alan T. Peacock and Jack Wiseman, The Growth of Public Expenditure in the United Kingdom, London, Oxford University Press, 1961, Page 16-19.

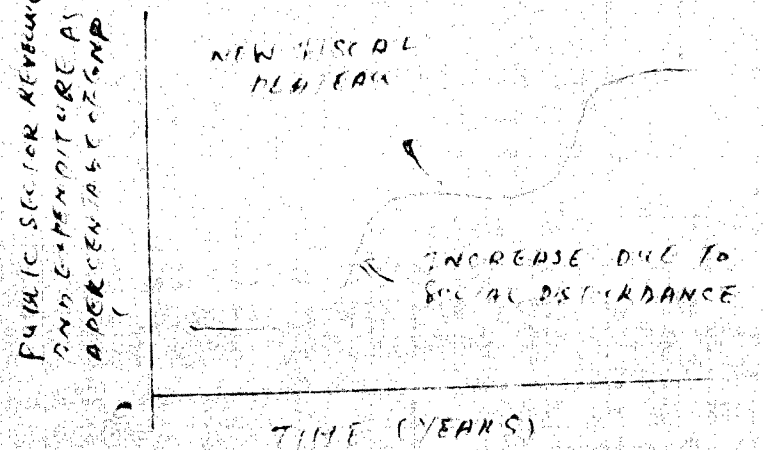
It should be noted that the highly underdeveloped economies do not fit into Wagner's generalisation. In such economies noneconomic considerations often play a more important role in determining the level of government expenditures than does per capita income. Wagner's law seems to be applicable to those countries that are in the process of transforming their economies from rural agricultural to urban industrial. It may be recalled that Western Europe went through this process in the nineteenth century; and it was mainly from such economies that Wagner drew the empirical evidence of his generalisation.

The Displacement, Inspection and Concentration Effects

The secular nature of Wagner's Law renders it difficult to develop ideas about government expenditures which are useful in considering short term questions. Peacock and Wiseman stress the time pattern of government expenditures and their actual process of growth over time.[4] From statistical data of the British economy for the period 1890 - 1960 they observe that the growth of total government expenditures took place on a "step-like" rather than on a continuous basis. They conclude that "the concept of a displacement effect can be used as the basis for a general and systematic approach to the analysis and interpretation of government expenditure statistics."[5] The displacement effect is demonstrated in Figure 3.2.

Figure 3.2

THE DISPLACEMENT EFFECT



In Figure 3.2 time is measured along the X-axis and public sector revenue and expenditure as a percentage of gross national product is measured along the Y-axis.

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[4] Ibid., Pages 20 - 34.

[5] Ibid., Page 30.

Peacock and Wiseman suggest that as social disturbances cause a relative expansion in public sector growth, a displacement effect takes place which helps to explain the pattern of expenditure growth. It should be noted that the displacement effect does not require the new level of government expenditures to continue with the same pattern as before the social disturbance. For example some services formerly paid for by private individuals may now be provided for by the government. Or technology may allow the government to produce new goods that did not exist before.

But what are the basic factors underlying the upward displacement? According to Peacock and Wiseman the basic constraint to the expansion of public expenditures is the level of taxation that could be raised. Citizens are assumed to possess a clear idea of "a tolerable level of taxation"[6] and this idea tends to be fairly stable in normal times. However the occurrence of any social disturbance such as war entails more expenditures on the part of the government so that additional revenue will have to be raised through a higher level of taxation. And because of the social disturbance this higher level of taxation is tolerated. But with regard to taxation there is a sort of ratchet effect whereby tax rates never return to their previous levels after the social disturbance. The higher level of revenue is used instead to support a greater amount of government expenditure.

Social distrubances have another effect on government. They tend to focus public opinion and that of the government on those spheres where government expenditure is lacking and to seek solutions to problems formerly neglected. In short social disturbance would expose the deficiency of government expenditure. This is the inspection effect.

Other than the inspection and displacement effects, Peacock and Wiseman also describe a concentration effect.[7] The concentration effect refers to the secular tendency for the central government to take over functions performed by local governments. As a direct result of this take-over the central government would have to increase its expenditures accordingly. This concentration process is not uniform with regard to all local governments and their functions. It affects different local governments

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6 Ibid., Page 23.

7 Ibid., Page 24-30.

in different fashions. This is so because local governments usually have a high degree of financial autonomy with their own traditions, and more often than not there will be political pressures to preserve their traditions.

This concentration process is distinct from the displacement process since the forces initiating the former operate in normal as well as abnormal times. To this extent the concentration process can take place independent of the displacement process even though some relations between the two could be expected. It is precisely during disturbances that resistance to central government's takeover breaks down easily. For instance in the case of a major war all petty arguments tend to be set aside in order to concentrate on the war.

Criticisms of the Displacement Effects

Peacock and Wiseman believe that their analytical procedure can be used for the analysis of public expenditures in countries other than the United Kingdom. However Pryor has raised three objections against this theory, covering theoretical, empirical as well as methodological grounds.[8]

Firstly according to this theory of Peacock and Wiseman the basic constraint on government expenditure is the "tolerable level of tax rates." If this is correct, then with progressive tax rates, if all tax revenues expended and if GNP per capita is increasing, government expenditures as a ratio of GNP will rise automatically and no displacement effect is needed to explain the rise in relative expenditures. Moreover if government borrowing is allowed the difficulty of changing the tax rates is no longer an important constraint on government expenditures. Secondly the displacement effect hypothesis does not seem to be able to explain the pattern of public expenditures in post-war Japan.[9] But if social disturbances are interpreted in a wide sense and used to explain changes in the pattern of government expenditures a posteriori, then the displacement effect hypothesis cannot be refuted or verified. As such this hypothesis is not a true scientific statement.

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8 Frederic L. Pryor, Public Expenditures in Communist and Capitalist Nations, London, George Allen and Unwin Ltd., 1968, 443-446.

9 Ibid., Page 444

Finally Peacock and Wiseman rely only on graphical evidence; they did not test the statistical significance of their displacement effect. By using equations with hypothetical variables to designate periods before and after certain wars Pryor has found that the displacement effect for government expenditure per capita in relation to time is important. But the displacement effect of per capita civilian government expenditure is not statistically significant. This means that whatever displacement had occurred was due entirely to increased expenditures for defence and other war-related purposes.[10]

Conclusion

In this chapter we have examined two theories which attempt to explain the actual facts of government expenditure growth. However neither the Wagner's Law nor the Peacock-Wiseman Hypothesis of Displacement provide any absolute rules by which government expenditure trends can be explained satisfactorily. However despite their deficiencies these two theories do throw some light on the growth of government expenditure over time. In particular the displacement hypothesis shows that in certain periods the tax system might act as a constraint on the expansion of government expenditures. Over a long period of time, however, upward displacement becomes discernible. Thus both theories predict that the secular growth of government expenditures is inevitable.

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10 See ibid., Page 444-445. The statistical analysis was carried out with respect to the United Kingdom data.

PART II

PUBLIC EXPENDITURES IN MALAYSIA

1957 - 1967