
Tax Structure and Economic Growth in Germany (1750 - 1850)

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Benjamin Franklin's statement that « Everyone must pay taxes and die » would not have found unanimous acceptance in 18th century Germany. The Reichstand of Braunschweig-Wolfenbüttel declared that it was « ... an immovable principle that taxes (were) against the nature of a constituted state ». K.H. Lang (1793) could seriously discuss the abolition of taxation in terms of a recovery from an illness.¹ But in most cases this illness had already proved terminal. A coherent taxation theory had indeed already evolved within the framework of German cameralism. Von Justi justified taxation on the basis of the state's protective role. « Equality of taxation arises from the fact that all citizens enjoy equal protection, security and justice. But the equality must follow not the person, but the property. For the richer a man is, the greater the protection . . . that he enjoys ».² Von Schröder (1723) viewed taxation as an economic regulator³ and with increasing acceptance of physiocratic doctrines tax theory became a central aspect of state planning.

In a developing economy the role of the tax system is invariably complex. It can curtail existing consumption and free resources for capital formation. It can also facilitate the effective reallocation of resources from investments commonly regarded as having little beneficial effect to those viewed as having a marginally greater benefit for economic growth. The tax system

¹ F. J. NEUMANN, *Die progressive Einkommensteuer im Staats- und Gemeinde Haushalt*, « Schriften des Vereins für Socialpolitik », Leipzig 1874, pp. 2-3.

² Cited in E.R.A. SELIGMAN, *Progressive Taxation in Theory and Practice*, Baltimore, 1894, p. 93.

³ E. F. HECKSCHER, *Mercantilism*, Ed. E. F. Söderlund, London and New York, 1962. Vol. II, p. 202.

can also attempt to provide an incentive to alter and restructure economic behaviour with the intention of stimulating economic growth, by providing added incentive to save, to enter the market sector, to work longer periods, or to undertake private-sector capital formation.⁴ The significance of the tax structure in the development of the German economy, however, has been almost completely neglected. What form did the tax system commonly take? To what extent did the individual tax structures, and the relative orientation and incidence of different types of taxation influence the pace and form of economic growth in the late 18th and 19th centuries? This paper will attempt to elucidate some preliminary findings.

There are perhaps two general ways of forming a taxation system to facilitate economic growth. First by emphasising the role of indirect taxation, individual capital accumulation can be assisted. The entrepreneurial class, through the application of thrift and a renunciation of heavy short-term personal consumption can increase its capital through profits and earnings and extend its level of investment in the economy.⁵ Arguably this was the case in England, where the land tax had gradually atrophied in its assessment⁶ and even in the mid 19th century only 18.6% of total receipts came from direct taxation. Secondly, given the predominance of the primary sector in developing economies, a concentration on a heavy, but not regressive, land tax can enable the use of agriculture as a basis for non-agricultural capital accumulation. This not only facilitates industrial growth, but also compels the peasant to adopt more productive methods of cultivation to offset heavy taxation. If the relative balance of direct-indirect taxation is examined in the context of several German states, can it be said that the proportional ratio adopted corresponded with either method of promoting economic growth?

Mid 19th century figures [Table 1] reveal the unimportance of direct taxes in most German states. In the majority of cases they seldom constituted more than 20% of gross tax receipts. Indeed this is typical of most developing countries. U.N. data reveal an unweighted average ratio of 21.6% (for direct taxation in 23 developing countries, as a proportion of central government revenue) and one of 34.2% for 18 advanced countries.⁷ Determining factors, such as difficulties in defining income, the lack of standardised weights and measures, illiteracy and the continued importance of the subsistence non-monetised sector, were equally prominent in the early 19th

⁴ J. F. DUE, *Taxation and Economic Development in Tropical Africa*, Cambridge, Massachusetts, 1963, p. 146.

⁵ C. P. KINDLEBERGER, *Economic Growth*, 2nd Edition, New York, 1965, p. 243.

⁶ P. MATHIAS, *The First Industrial Nation*, « An Economic History of Britain, 1700-1914 », London, 1969, p. 39.

⁷ A. R. PREST, *Public Finance in Underdeveloped Countries*, London, 2nd Edition, 1972, p. 33.

TABLE I.
PROPORTION OF STATE INCOME FROM DIRECT TAXATION. (1861/3)

Country	%	Country	%
Serbia	77	Belgium/Spain	21.6
Turkey	52	Baden	20.6
Romania	42	Prussia	20.2
Portugal	32.8	Bavaria	20
Austria	30.8	Russia	18.7
Denmark	27.2	U.K.	18.6
Greece	27	Saxony	18
Italy	25	Switzerland	16.2
France	24	Hanover	14
Württemberg	23	Sweden	4.5
Holland	21.9		
<i>Smaller German States.</i>			
Lippe-Detmold	37.2	Hessen-Cassel	18.2
Hessen-Darmstadt	30.3	Hamburg	17.3
Nassau	29.1	Bremen	16.4
Sachsen-Weimar	28.9	Lübeck	16.0
Reuss-Schleiz	27.3	Mecklenburg-Strelitz	14.1
Sachsen-Altenburg	24.2	Waldeck	14.1
Mecklenburg-Schwerin	21.9	Reuss-Greiz	13.3
Schaumburg-Lippe	19.2	Hessen-Homburg	12.1
Sachsen-Coburg-Gotha	19.1	Schwarzburg-Sonderhausen	11.0
Frankfurt a. M.	19.0	Anhalt	10.4
Oldenburg	19.0	Braunschweig	8.2
Sachsen-Meiningen	18.4	Schwarzburg-Rudolstadt	2.8

(O. HAUSNER, *Vergleichende Statistik von Europa*, I Bd., Lemberg, 1865, pp. 314-16.)

century. In Bavaria, for example, despite attempted educational reform involving the introduction of compulsory attendance for all children between 6 and 12 years (1802) and curriculum improvements (1804, 1806, 1811), regional figures for 1840-9 show that only 58% of men and 50% of women could sign their names.⁸ Peasant accounts, even of a rudimentary kind, do not become common until the 1870's. The absence of a market economy was also reflected in the fact that in the Landgericht Freising only 28.5% of the annual grain crop and 0.2% of the region's sheep came up for sale.⁹ To this extent the relative emphasis on indirect taxation, as embodied in the Prussian « Accise- und Steuerordnung » of 30 July 1641, the general

⁸ Staatsarchiv für Oberbayern (St.A.ObB.), Brief-Protokolle, Landgericht Freising, Nos. 20-27.

⁹ St.A.ObB., Regierungs-Akten (R.A.), 1123/15702.

« Acicse » of Saxony (1641), Kurpfalz (1672), Hanover (1686), Silesia (1705) and Württemberg (1719) reflected the practical difficulties of enforcing an effective taxation system in many relatively under-developed areas of Germany.

The long-term movement in the balance between direct and indirect taxation, however, is significant, as the 19th century often witnessed an increased reliance on the latter source of income. In Braunschweig the proportion of state income derived from various indirect taxes rose from 23.7% (1814) to 26.2% (1852-4).¹⁰ In Bavaria the increase was from 27% (early 1770's) to 46.5% (1849-51)¹¹ and in the Grossherzogtum Baden from 19.8% (1850) to 41.1% (1900), a development reflected in the relative change in taxation levels per head of population [Table 2].¹²

TABLE 2.
TAX LEVELS PER HEAD OF POPULATION: GROSSHERZOGTUM BADEN (Mk.)

	Direct	Indirect
1850	3.64	3.18
1860	4.29	4.26
1870	5.85	5.20
1880	6.57	7.11
1885	6.63	7.58
1890	7.52	9.11
1895	7.36	9.50
1900	8.73	12.17

(A. BUCHENBERGER, *Finanzpolitik und Staatshaushalt im Grossherzogtum Baden in den Jahren 1850-1900*, Heidelberg, 1902, p. 171.)

Increased indirect taxation yields reflected in part a higher turn-over of assessed commodities and higher consumption levels. At the same time the extension of the Customs Union did involve a deliberate increase in the level of excise taxes, when states joining the "Zollverein" (such as Hessen-Cassel in 1831 and Brunswick in 1841) were largely compelled to adopt the Prussian excise system¹³ and by the introduction of new taxes such as

¹⁰ KYBITZ, *Der Staatshaushalt des Herzogtums Braunschweig in den Jahren 1837-1886*, Finanz Archiv, 5th Jahrgang, 1888, p. 746.

¹¹ E. SCHREMMER, *Die Wirtschaft Bayerns*, Munich 1970, p. 260. W. BURKHARD, *Das Bayerische Staatsbudget in den ersten 70 Jahren seit Bestehen der Verfassung, 1819-1886*, Finanz Archiv, 1889, p. 227.

¹² A. BUCHENBERGER, *Finanzpolitik und Staatshaushalt im Grossherzogtum Baden in den Jahren 1850-1900*, Heidelberg, 1902, pp. 137, 171.

¹³ W. O. HENDERSON, *The Zollverein*, Cambridge, 1939, pp. 81, 126.

the sugar tax (8 June 1841), salt tax (12 October 1867) and tobacco tax (26 May 1868).¹⁴ The general weighting of the tax structure of many German states towards an increased reliance on indirect taxation, however, had important ramifications in the context of promoting economic growth.

(a) The tax structure directly affected the relative balance of consumption and investment. Significantly the annual growth rate of consumer goods industries of 2% (1834-60) was substantially lower than the 6.3% p.a. of producer goods industries (1834-1855/60).¹⁵ Although real consumption per head continued to rise from 258 marks (1850) to 570 marks (1913) (at 1913 prices), private consumption rose at a lower rate than net social product.¹⁶ By checking both actual and potential consumption indirect taxation was one element in increasing the rate of investment, which rose substantially in the private sector. The number of savings bank accounts as a percentage of population rose in the whole of Germany from 1.6% (1850) to 33% (1910). The growth rate for Φ (FIR - quotient of the aggregate market value of all financial instruments to the value of tangible net national wealth) in the late 19th century was the second highest in Europe after Switzerland, which also had a tax structure weighted towards indirect taxation¹⁷ and significantly the figures for saving deposits in the early 1860's¹⁸ [Table 3] show that the mobilization of private capital was often most advanced in those areas of Europe with a lower weighting factor for direct taxation. It is therefore possible to view the general taxation system of Germany as a factor contributing to a higher rate of net personal saving, by its general emphasis on various forms of indirect taxation.

(b) Equally the ability to defer consumption and thereby maximise the potential use of a high proportion of gross income would have been important in the context of individual investment in industry. In the early stages of industrialization, when external sources of capital were often in short supply and reliance had to be made on auto-financing or the transference of accumulated resources from other sectors of the community, the advantages of a tax system which could maximise the level of net disposable income retained in the hands of the entrepreneurial class were obvious. In Cologne many of the important private banks involved in financing industrialization

¹⁴ M. NEWCOMER, *Central and Local Finance in Germany and England*, New York, 1937, p. 20.

¹⁵ W.G. HOFFMANN, *The Take-off in Germany*, in W.W. ROSTOW (ed.), «The Economics of Take-off into Sustained Growth», London, 1963, pp. 106, 108.

¹⁶ W.G. HOFFMANN, *Das Wachstum der deutschen Wirtschaft seit der Mitte des 19. Jahrhunderts*, Berlin, Heidelberg, New York, 1965, p. 109.

¹⁷ O. HAUSNER, *Vergleichende Statistik von Europa*, II. Band, Lemberg, 1865, pp. 352-3.

¹⁸ R.W. GOLDSMITH, *Financial Structure and Development*, New Haven and London, 1969, p. 358 and *passim*.

TABLE 3.

RATIO OF SAVING DEPOSITORS PER POPULATION (1859/63)

Switzerland	1 : 7.1	Hanover	1 : 21
Württemberg	7.5	Bavaria	21
Sachsen-Altenburg	7.6	Hessen-Cassel	21.6
Mecklenburg	8.1	Baden	22.1
Saxony	8.5	Prussia	25
Sachsen-Weimar	9.9	France	27.1
Anhalt	12	Holland	28.3
Denmark	12.4	Belgium	29.7
Oldenburg	18.4	Nassau	31.1
U.K.	18.7	Austria	49.6
Hessen-Darmstadt	18.8	Italy	65.9

in the early 19th century, such as J.D. Herstatt (founded in 1780, Salomon Oppenheim (1789) and J.H. Stein (1790) had accumulated capital in trade. To the extent that the taxation system facilitated individual capital accumulation, it positively influenced the process of economic growth.

The precise effect of a tax system, however, will be dependent not only on the choice between direct and indirect taxes, but on the specific role of each constituent element. If the multiplicity of taxes in the various German states precludes a fully comprehensive analysis, attention will be focussed on the central direct taxes on land, trade and industry, and capital, as well as the more important features of indirect taxation.

In a country where the primary sector remained predominant, even in the late 19th century, it was understandable that the major element in direct taxation should have been a tax on land. In 1726 the "Grundsteuer" in Württemberg contributed 26,501 m. *gulden* to a total state income from direct taxes of 37,034 m.¹⁹ In Bavaria in 1808 yields from the land tax constituted 68.1% of total direct receipts²⁰ and the proportion in Braunschweig (prior to the fiscal reforms of 1817) stood at 88%.²¹ The continued importance of the land tax, even in the period 1881/6 can be seen in Table 4.

By the late 18th century, however, the need for reforms in the sphere of land taxation was becoming increasingly apparent. In Bavaria, for example, its form had been laid down in successive agreements between the Elector and the Estates during the 16th century and particularly in the preface to

¹⁹ K. F. VON SCHALL, *Beiträge zur Reform der direkten Steuern in Württemberg unter Berücksichtigung der Steuerreform in Preussen*, Finanz Archiv, 1895, p. 3.

²⁰ W. ZORN, *Kleine Wirtschafts- und Sozialgeschichte Bayerns*, Bayerische Heimatforschung Heft 14, Munich, 1962, p. 15.

²¹ KYBITZ, *op. cit.*, p. 753.

TABLE 4.

THE RELATIVE LEVEL OF DIRECT TAXES IN THE HERZOGTUM
BRAUNSCHWEIG: 1833/40 - 1881/86

	(in Taler) (per head)		
	Grundsteuer	Personalsteuer	Gewerbsteuer
1833/40	1.27	0.32	0.10
1841/50	1.21	0.29	0.10
1851/60	1.23	0.31	0.11
1861/70	1.21	0.32	0.18
1871/80	1.16	0.21	0.25
1881/86	1.07	0.15	0.24

(Kysirz, *Der Staatshaushalt des Herzogtums Braunschweig in den Jahren 1833-86*, Finanz Archiv, 1888, 5. Jg., p. 753.)

the Tax Instruction of 1507/8.²² In time it became incomplete and unequal in assessment, so that even good officials could not locate the owners of isolated strips of land.²³ Similarly in Hessen the original « Treysaer Anschlag » of 1576, which had involved a mixed system of oaths and assessment, had gradually become ineffective and inefficient, in the absence of cadastral surveys and regular re-assessments.²⁴ The reforms of the early 19th century tended towards the adoption of a yield tax levied on all types of land. The "Definitivum" in Hessen (13.5.1824) involved the application of calculated average yields to individual strips of land on the basis of an accurate survey. Although a comprehensive yield-based land tax was not introduced in Braunschweig until 1849, it then classified all land in 13 different categories with fixed maxima and minima, dependent on the relative yield of each individual crop.²⁵ Further reforms of this general nature included the legislation in Sachsen-Weimar of 1817/9, the cadastral tax of Württemberg (15 July 1821), the Bavarian tax reforms of 1807 and 1827, and the rectified "Grundsteuer" of Sachsen-Meiningen (27 March 1831). In the majority of cases estimates were based on net yield, except in a few states, such as Bavaria, where the assessment criterion was the land area in relation to its gross productivity.

²² ANON, *Zur Geschichte Bairischer Landschaft und Steuern*, Munich, 1800. P. FRIED, *Zur Geschichte der Steuer in Baiern*, Zeitschrift für bayerische Landesgeschichte, Band 27, Munich, 1964, p. 594.

²³ X. HILGER, *Skizze zur Bearbeitung einer ewig neu bleibenden Grundsteuer Beschreibung*, Landshut, 1802, p. 8.

²⁴ G. SCHANZ, *Die direkten Steuern Hessens und deren neueste Reform*, Finanz Archiv Band II., p. 237.

²⁵ KYBITZ, *op. cit.*, p. 726.

The restructuring of individual land taxes in the first half of the 19th century certainly had positive features. On the one hand excessive local and regional variations in assessment were ironed out. In Sachsen-Weimar, prior to the reform of 1821, there had been at least 50 different land taxes and according to the estimates of the "Landschafts-Collegium" (1820) land in Fulda and Kurhessen would have paid 70% and land in Erfurt only 50% of what it would have yielded on the basis of the central Weimar tax regulations.²⁶ This simplification of the land tax system was common to many German states and an important means of preventing unnecessary shifts of factors of production in the primary sector related to the individual rates of taxation. On the other hand a greater degree of equalisation was introduced in certain territories by the abolition of tax privileges formerly granted to noble and ecclesiastical estates. In Sachsen-Weimar these were ended in 1817, although compensatory payments were necessary. Similarly in Hessen tax privileges had been curtailed by legislation of 1 October 1806. To this extent definite steps had been taken to minimise an uneven application of the land tax.

Given the assumption, however, that rapid and large returns in the agricultural sector are possible with relatively minor changes in techniques, provided suitable fiscal policies are pursued, to what extent did the form of the land tax and its development in individual German states contribute to increased output and efficiency? Among the requirements of a land tax system are (a) responsiveness to changes in production and income and (b) appropriateness in terms of the balance in taxation between agriculture and other sectors of the economy.²⁷ Cadastral systems designed to reveal "registered values" (or yields) unfortunately suffer from a high rate of obsolescence. The fiscal-economic effect of the land tax reforms of the early 19th century was therefore often mitigated by the inbuilt lag between land tax receipts under a cadastral system and the growth in land values and crop production. The revenue inflexibility of most land taxes was intensified by the rigidity of their rate and structure and the inherent difficulty of constant adjustment. As a result as cadastral values associated with the yield taxes became outdated, the original assessment became less equitable. This danger was reflected in the stability of land tax receipts in many German states. In Saxony the "Grundsteuer" yielded 1,459,370 Reichstaler in 1847 and only 1,518,800 Reichstaler in 1866.²⁸ In Sachsen-Weimar, despite increases in agricultural output, the yield from the land

²⁶ A. BORST, *Die Grund- und Einkommensteuer des Grossherzogtums Sachsen-Weimar*, Jena, 1879, p. 4.

²⁷ H. P. WALD, *Taxation of Agricultural Land in Underdeveloped Economies*, Harvard, 1959, p. 73.

²⁸ F. J. NEUMANN, *op. cit.*, p. 6.

tax only rose from 160,924 *taler* (1822/3) to 169,700 *taler* (1869/71).²⁹ In Sachsen-Meiningen there was almost no change in receipt levels between 1840/1 and 1850/1.³⁰ The widespread unresponsiveness of the yield taxes produced growing inequalities in assessment and at the same time limited the scope of this fiscal weapon for the promotion of increased productivity. (It should also be noted that the cost of a cadastral system for many German states reduced its viability as an effective tax form. The estimated labour input for Bavaria (1807/8) was 48,822 man-days to cover the c. 25 million separate parcels of land).³¹

As far as the relative tax balance between agriculture and other sectors was concerned a realistic weighting factor was clearly lacking. Saxony retained until 1844 a repartitional basis for taxes on land, housing and trade, incorporating a proportional division of 17, 4 and 3/24ths, resulting in a 11% tax on landed income and 2½% on personal income. In Bavaria the differentiated assessment rate which had been part of the 18th century tax system was also retained. The land tax was levied at ¾% per 100 *gulden* current value; the house tax at ¼% and the tax on seigneurial and tithe income at ½%.³² The extent of the disproportionately high tax burden which the primary sector was still forced to carry in the early 19th century is also illustrated in the case of Sachsen-Meiningen. Despite the reform of 1831, a 5% reduction in the 1831/2 assessment had to be made in 1834 and extended to 25% in 1835.³³ These short-term measures to alleviate continued deficiencies in the appropriateness of the relative tax burden on agriculture, however, were not supplemented by a basic reform until 1869. That this was well over due, was reflected in the immediate fall in total state receipts from the land tax from 214,153 *gulden* (1860/1) to 158,697 *gulden* (1870).

An optimum level for a land tax is difficult to ascertain, but it runs the danger of being either too light (in which case it fails to release adequate resources for other sectors) or too heavy, curtailing some taxpayers' incomes below subsistence requirements (impairing health and work efficiency). Given the problems facing the primary sector in Germany in the first half of the 19th century, including the continued importance of subsistence agriculture, the level of land tax assessment in certain states was arguably

²⁹ A. BORST, *op. cit.*, pp. 34/5.

³⁰ O. COSTABELL, *Die Entwicklung der Finanzen im Herzogtum Sachsen-Meiningen von 1931 bis zur Gegenwart*, Jena, 1908, p. 38.

³¹ J. AMANN, *Die bayerische Landesvermessung in ihrer geschichtlichen Entwicklung*, 1908. G. VON GRÜNBERGER, *Kurzgefasste Geschichte und Darstellung der Kataster-Commissions Arbeiten*, Munich, 1819, *passim*.

³² The taxation assessments remained the same in later years, except for an increase in the house tax from 1/4 to 1/3%. *Regierungsblatt*, Munich, 1813, p. 9. *Steuermandat*, 26.12.1812.

³³ O. COSTABELL, *op. cit.*, p. 37.

too high. [Table 5]. The proportion of gross yield taken via state taxation stood at 9% in Prussia; 10% in Württemberg; 11% in Saxony; 13% in Nassau; 15% in Bavaria; 16% in Baden and 20% in Hessen-Darmstadt. Although the absolute effect of established land tax levels depended on other factors, such as variations in production costs and the incidence of private sector fiscal burdens, despite the reforms of the early 19th century, they were seldom optimally designed to promote increased production. Production of vegetable products only increased by 62% (1816-65), hardly

TABLE 5.
THE RELATIVE LEVEL OF "GRUNDSTEUER" IN RELATION TO
YIELD-GIVING LAND (1859/63)
(in French francs)

Frankfurt a. M.	18.20	Hanover	2.06
Bremen	17.60	Bavaria	2.00
Hamburg	17.15	Hessen-Homburg	1.95
Holland	6.84	Sachsen-Weimar	1.88
Belgium	6.67	Turkey	1.82
Lübeck	6.60	Schwarzburg-Sonderhausen	1.80
France	5.46	Prussia	1.52
Italy	5.26	Schaumburg-Lippe	1.50
Hessen-Darmstadt	4.78	Sachsen-Meiningen	1.42
Saxony	4.26	Reuss-Greiz	1.40
Nassau	3.86	Mecklenburg-Schwerin	1.34
Portugal	3.71	Mecklenburg-Strelitz	1.30
Austria	3.59	U.K. / Lippe-Detmold	1.30
Sachsen-Altenburg	3.32	Oldenburg / Waldeck	1.15
Baden	3.21	Braunschweig	1.12
Spain	3.18	Greece	1.10
Anhalt	2.80	Denmark	1.08
Hessen-Cassel	2.76	Romania	0.93
Württemberg	2.41	Serbia	0.90
Sachsen-Coburg-Gotha	2.28	Russia	0.40
Reuss-Schleiz	2.20	Switzerland	0.26

(O. HAUSNER, *op. cit.*, p. 325.)

exceeding the growth of population.³⁴ The tax often fell between two stools. If it involved an over-assessment of agriculture in comparison with other sectors of the economy, thereby delaying the disappearance of subsistence farming, the absence of a responsive structure also meant that the quasi-economic motives for landholding prominent in pre-industrial societies were not eroded with sufficient speed.

³⁴ W. G. HOFFMANN, *op. cit.*, p. 163.

In Bavaria, for example, despite the fact that it remained a relatively poor agricultural state with a low tax-paying ability, taxes on property remained higher per capita than in both Prussia and Saxony.³⁵ In theory any tax that impinges upon a necessary economic reward tends to have a greater deterrent effect on enterprise than an equivalent tax on an economic surplus. The positive income-effect which the higher taxation of land in Bavaria might have induced was emasculated by the inelasticity of capital supply, thereby preventing the activating of stimuli designed to maintain customary standards of living. Despite the establishment of local lending institutions (Munich, 1808; Landshut, 1808; Dachau, 1816; Freising, 1828³⁶), the increased availability of external capital supplies remained insufficient to meet the long-term capital demands of increased production, necessary to offset the marginally higher land tax levels in the primary sector. Together with the depressed market for agricultural surplus in the 1820's and 1830's, high taxation assessments contributed to the slow rate of improvement and the increasing level of indebtedness.

The classification of land in the cadastral surveys often effectively minimised any incentive element in the improvement of inferior soils. In Anhalt, for example, there were too few classes and the holders of first class arable were, in fiscal terms, better off than those with inferior land.³⁷ Furthermore the fact that marginal or sub-marginal land in cultivation was taxed, even when the rental value was the tax base, suggests that at the bottom of certain land tax assessment scales in early 19th century Germany, tax assessments in excess of the economic rent were common.

The timing of the collection of land taxes also continued to be a major problem. Collection after the harvest period invariably meant a higher short-term indebtedness level and in certain cases the necessity of raising adequate funds to meet tax assessments helped to depress the prices obtained for agricultural commodities and thereby increased the marginal burden of the tax.

Finally the transition to cash payments as a result of Emancipation legislation and increased commutation for both state and seigneurial taxes, probably occurred too rapidly. Far from forcing producers into greater contact with a market economy, the higher net level of cash commitments retarded the possibility of increased productivity, by effectively reducing the peasant's available capital stock. A Prussian estimate of the early 1820's established the level of direct land taxation at $6\frac{1}{2}$ *taler per head*, considerably

³⁵ M. NEWCOMER, *op. cit.*, p. 28.

³⁶ St.A.ObB. R.A. 1104/15679. «...bei ihrer Ausdehnung auf das flache Land möchten für den Bedürftigen Landmann grösseren Vorteile als wirkliche Hilfe entstehen...».

³⁷ G. SCHANZ, *Die Steuern im Herzogtum Anhalt, ihre Entwicklung und neueste Reform*, Finanz Archiv, 1887, p. 995.

in excess of average assessments in others parts of Germany unaffected by Emancipation legislation.³⁸ Taxes in kind are viewed as having two useful attributes — (a) an inducement effect, where equivalency ratios between different crops provide the farmer with the option of paying taxes with any of several basic crops and (b) a high tax revenue feasibility particularly in primary sectors with limited cash availability. By finally restricting land taxation to payments in cash, the reforms of the early 19th century failed to appreciate the nature of the problems facing German agriculture.

If attention is now directed to the developing secondary sector, what evidence is there for a positive/negative influence of fiscal policy? How did the structuring of the "Gewerbsteuer" affect the economic viability of industrial enterprises and their survival rate? Despite variations in assessment methods, however, most of the taxes levied under this heading had built-in inducement effects favourable to increased production and high net profit rates.

(a) The general stability of tax assessments on this sector implied an increasing discrepancy between actual productive capacity and state taxation levels. In Sachsen-Meiningen tax receipts from the "Gewerb- und Nahrungssteuer" (introduced in 1832 on income from trade, manufacturing, industrial production, art and capital) fell continuously from 96,804 marks (1833/4) to 85,560 marks (1580/1), despite evidence of increased output from the secondary sector.³⁹ Similarly in Prussia, despite an increased yield from the "Gewerbsteuer" between 1850-1870, the proportional contribution to total state receipts only rose from 11.4% to 11.6%.⁴⁰ The retention of the original tax base of 1820 meant that it became increasingly out of tune with the situation existing in the secondary sector, given the established pace of technological/industrial development. Even where increased tax assessments were implemented, as in Hessen in 1859 producing a 25% increase in state receipts, the absence of complaints from manufacturers indicates that even then the taxable capacity of individual concerns was not being fully exploited.⁴¹ Substantial under-assessment to the "Gewerbsteuer" would then have favoured further expansion.

(b) In terms of contribution of the expanding secondary sector to National Income the degree of under-assessment could be considerable. In Württemberg, for example, despite triennial assessment revisions, the secondary sector was never asked to make a proportional contribution to

³⁸ V. GROPP, *Der Einfluss der Agrarreformen des beginnenden 19. Jahrhunderts in Ostpreussen auf Höhe und Zusammensetzung der preussischen Staatseinkünfte*, Berlin, 1967, p. 156.

³⁹ O. COSTABELL, *op. cit.*, p. 44.

⁴⁰ A. WAGNER, *Die Reform der direkten Staatsbesteuerung in Preussen im Jahre 1891*, Finanz Archiv, 1891, p. 101.

⁴¹ G. SCHANZ, *Die direkten Steuern Hessens und deren neueste Reform*, Finanz Archiv Band II., p. 241.

state revenue. In 1863 the relative contribution of the primary and secondary sectors to NI amounted to 140 million *gulden* and 120 million *gulden* respectively. Whereas agriculture contributed 16.8 million *gulden* in 1846 to state coffers, the assessments on trade and manufacturing remained extremely moderate, rising from a mere 363,213 *gulden* (1826) to 474,029 *gulden* (1873), 4-4.7% of gross tax receipts.⁴² Indeed the Tax Commission of 1872 admitted that such a mal-distribution of central taxation burdens bordered on illegality and yet the retention of the repartitional system of 1823 given the fundamental changes in the importance of the different sectors in the economy, made such a situation inevitable. In Anhalt-Cöthen, however, the incidence of the "Gewerbsteuer" had actually been reduced in 1816 and 1866.⁴³

(c) Tax assessments on the secondary sector were also structured to promote the growth of rural/domestic industries. If the Kurfürsten of Bavaria had initially opposed the spread of variegated forms of rural industry, the economic advantages of low labour and production costs soon began to outweigh political considerations. By 1788 restrictions on the spread of rural industry had been lifted. Linen production was particularly noted in Upper Frankonia, shoe-making in the Palatinate and wood-carving in Oberbayern.⁴⁴ Significantly the early 19th century tax reforms primarily benefited small-holders engaged in domestic trades [Table 6]. The tax of 1814 meant a substantially lower assessment level for most rural trades and professions. By 1833 the average level of direct taxation per family (Landgericht Freising)

TABLE 6.
AVERAGE LAND TAX ASSESSMENTS ACCORDINGS TO TYPE OF HOLDING:
HOFMARK MASSENHAUSEN (OBERBAYERN)
(in Gulden)

Type of Holding	1773	1812
1	8. 4.	6.51.
1/2	4.53.	4.28.
1/4	3.31.	2.31.
1/8	1.31.1.	39.3.
1/16	1.10.3.	5.6.

(W. R. LEE, *Some Economic and Demographic Aspects of Peasant Society in Oberbayern from 1752 to 1855, with special reference to certain Estates in the former Landgericht Kranzberg*, D. Phil., Oxon, 1972, p. 325.)

⁴² F. J. NEUMANN, *op. cit.*, p. 14.

⁴³ G. SCHANZ, *Die Steuern im Herzogtum Anhalt, ihre Entwicklung und neueste Reform*, Finanz Archiv, 1887, pp. 978, 992.

⁴⁴ F. DÜRIG, *Landwirtschaftliche Hausindustrie*, in «Die Landwirtschaft in Bayern», Munich, 1890, pp. 509-515.

stood at 6 *gulden* 20 *kreuzer*, although families engaged in rural industry paid a significantly lower rate of 4 *gulden*.⁴⁵ Equally in Braunschweig rural trades were exempted from the remodelled "Gewerbsteuer" of 1821 and allowed to pay a traditional tax at a lower rate. By facilitating an initial expansion of rural production, the fiscal policies undoubtedly contributed to the overall pace of industrial growth.

(d) In almost every case the "Gewerbsteuer" involved a system of classification either by alphabetic categories or estimated income yield. The Prussian tax with a tripartite classification of major occupations distinguished between manufacturers, hoteliers/innkeepers and workers employing assistants. The Bavarian tax, on the other hand, classified each trade alphabetically according to 5 main groups, dependent on the location of the trade [Table 7],

TABLE 7.
THE ASSESSMENTS UNDER THE BAVARIAN "GEWERBESTEUER" OF 1807

Trade	Main Classification				
	Rural	In cities and market towns of			
		-400 families	400-1000 f.	1000-2000 f.	+2000 f.
Chemist	2-3	2-3	2-3	2-3	3-4
Baker	1-2	2	2	2-3	2-3
Cotton weaver	1	1	1	1	1

(G. SCHANZ, *Das bayrische Ertragssteuersystem und seine Entwicklung*, Finanz Archiv, 1900, p. 29.)

covering a total of 129 separate occupations. In most cases, however, the "Gewerbsteuer" favoured the larger concern. In Hessen it was not until the reform of 1858 that sufficient attention was paid to the size of concern and a more equal assessment levied on larger premises. In Bavaria the 1808 payment scale of 2-30 *gulden* clearly under-estimated the high profits which large-scale firms in the secondary sector could often achieve in the early decades of the 19th century. According to the Steuerkommissariat Offenbach (Hessen) assessments varied from 0.1 - 7.3% of income and in every case larger concerns received preferential treatment.⁴⁶ In Anhalt, although the necessity for a more equitable taxation of larger concerns was realized, even the 1859 law only placed a tax of 2% on net profits. The viability and growth potential of large-scale manufacturing was therefore reinforced, both

⁴⁵ St.A.ObB. R.A. 1124/15703.

⁴⁶ G. SCHANZ, *Die direkten Steuern Hessens und deren neueste Reform*, Finanz Archiv, Band II., p. 333.

directly by effective under-taxation and indirectly, by reducing the competitive strength of small-scale producers.

Preferential treatment was also the case in the taxation of capital values. In a period when capital supply could not be predetermined, given the imperfect developmental state of the money and capital markets, the high risk factor of certain investment forms and a preference for high liquidity, such a policy is understandable. Typical supportive arguments were put forward in the Bavarian legislation of 1827:⁴⁷ effective taxation of capital would drive indigenous supply abroad, minimising net funds for the developing secondary sector, depress investment propensity and force up interest rates, which would lead to higher production costs both in agriculture and industry. It was generally agreed that the difficulty of enforcing such a tax on capital prevented accurate income assessments and could only lead to injustice. A special capital tax «... has no place alongside of the land, building and business taxes that form so large a part of the fiscal receipts».⁴⁸ Taxation of returns on capital accruing to foreign investments was also precluded on the grounds that the resulting disincentive effect would deter further investment. In Sachsen-Weimar the fear of an outward flow of existing capital supplies prompted the Government's desire for a «mild treatment» of capital income.⁴⁹ Administrative imperfections magnified the benefits thereby accruing to owners of capital. Similarly in Anhalt the tax reform of 16 March 1807 showed a preferential deference towards capital income, adopting a tax-free allowance of 100 *taler* and a standard rate of 1%. Although attempts had been made in Saxony to effectively tax capital income (such as the tax of 1742 and the "extra-ordinary" tax of 12 November 1813)⁵⁰ and although the state's judicial right to do so had been recognised in 1834, a comprehensive tax (extending to share dividends and rent income) was only implemented in 1850. In other cases the fiscal protection of capital was maintained even longer, as in the Hannoverian legislation of 1859.⁵¹ Even in 1900/1 direct taxation rates in Baden stood at 15 *pfennige* (per 100 marks of taxable capital) for most forms of income, except capital, where the rate of 10 *pfennige* was in force.⁵²

Although the causal relationship between a high rate of capital formation and a rapid growth in productivity and income is complex, there can be

⁴⁷ Motive zu den Gesetzentwürfen über die Erwerb- und Gewerbesteuer. Verhandlungen der Kammer der Abgeordneten, 1827/8. Beilage Bd. V, Beilage 31, p. 3. G. SCHANZ, *Das bayerische Ertragssteuersystem und seine Entwicklung*, Finanz Archiv, 1900, p. 569.

⁴⁸ C. F. BASTABLE, *Public Finance*, London, 1895, p. 423.

⁴⁹ A. BORST, *op. cit.*, p. 11.

⁵⁰ A. JUDEICH, *Die Rentensteuer im Königreich Sachsen*, Dresden, 1857, pp. 12, 15.

⁵¹ C. ERKLEBEN, *Betrachtungen über die Staats-Einnahmen und Ausgaben in Preussen und Hannover und über einen für Hannover zu bildenden Provinzialfonds*, Hannover, 1866, p. 17.

⁵² A. BUCHENBERGER, *op. cit.*, p. 261.

little doubt of their accompanying interrelationship in 19th century Germany. Although the net national capital-output ratio moved from 3.5 (1850's) to c. 5.5 (1891-1913),⁵³ capital formation itself remained of crucial importance, both in maximising employment possibilities and implementing technical change, often embodied in the act of investment. Given the problems of overall capital availability and the locational distribution of existing capital flows, it was necessary for individual states to extend the relative availability of investible funds from as many different sources as possible. On the one hand individual investment requirements in the secondary sector were often substantial. The merchant Schmilder of Reith invested 13,000 *taler* (1846) in a yarn-spinning factory.⁵⁴ In 1845 the Augsburg Kammgarnspinnerei GmbH. of von Schaezler incorporated a capital investment of 700,000 *gulden*.⁵⁵ The Ruhr firm of Eschweiler Bergwerke Verein A.G. (founded in 1834) required a capital of 3 m. *taler* by 1848. On the other hand the problem of undercapitalization in the primary sector particularly in the southern states of Bavaria and Württemberg remained acute. The number of peasant bankruptcies in Württemberg, for example, rose from 1,062 (1840) to 8,813 (1854).⁵⁶

The policies adopted by individual states in dealing with these problems varied considerably. The first Savings Banks had been founded in 1765 in Braunschweig, Oldenburg and Hamburg. The risk element in the placing of capital was reduced by specific reforms of the credit laws, as in 1822 in Bavaria.⁵⁷ To the extent that preferential fiscal treatment of capital income fitted into this context, it can be viewed as a positive contribution to the development of increased capital supply. Average assessment rates, where capital income was subject to the "Personalsteuer" (1859/61) of 0.46 francs per head (Saxony) and 0.37 francs (Braunschweig) compare favourably with the figure of 4.20 francs in Holland.⁵⁸ In the period 1850/4 - 1870/4 net

⁵³ W. G. HOFFMANN, *Long-term Growth and Capital Formation in Germany*, in F. A. LUTZ & D. C. HAGUE (ed.), «The Theory of Capital», Proceedings of a Conference of the International Economic Association, London, 1961, pp. 123, 127.

⁵⁴ H. MOTTEK, *Wirtschaftsgeschichte Deutschlands*, Ein Grundriss, Band II., Berlin, 1971, p. 124.

⁵⁵ W. ZORN, *Handels- und Industriegeschichte Bayerisch-Schwabens, 1648-1870*, Augsburg, 1961. Veröffentlichungen der Schwäbischen Forschungsgemeinschaft bei der Kommission für Bayerische Landesgeschichte, Reihe I., Bd. 6, p. 153.

⁵⁶ E. C. DINKEL, *Ueber die bäuerlichen Credit-Verhältnisse in Württemberg*. Zeitschrift für die gesamte Staatswissenschaft, vol. XII, 1856, p. 574. A. LOEWENSTEIN, *Geschichte des Württembergischen Kreditbankwesens und seiner Beziehungen zu Handel und Industrie*, Archiv für Sozialwissenschaft und Sozialpolitik. Ergänzungsheft V, 1912, p. 7. ANON, *Die Zahl der Gantungen in Württemberg während der Jahre 1846-47*, Württembergische Jahrbücher, 1847, pt. ii.

⁵⁷ Hypothekengesetz I.6.1822 (para. 12): Hypothekengesetz 26.5.1825. Handbuch des Hypothekenrechtes und der Hypothekenordnung des Königreiches Bayern. Amberg, 2nd edition, 1826, *passim*.

⁵⁸ O. HAUSNER, *op. cit.*, Bd. 1, p. 329.

investment levels for the whole of Germany rose from 7.9% to 10.9% of GNP and significantly the middle years of the century, before the gradual introduction of general income taxes (including capital income) reveal extremely high growth rates in registered capital income, from 1,058 m.mk. (1850/4) to 2,369 m.mk. (1865/9).⁵⁹ During the whole period 1850-1913, for which aggregate statistics are available, the ratio of savings to income "rose strongly" and there is every indication that this had its origins in the earlier decades of the 19th century. On a more local level, the pattern of loans made to peasants on the Hofmark Massenhausen (Oberbayern) reflects the success of the state in broadening the credit/capital base. [Table 8]. The number of loans made by higher government officials

TABLE 8.
THE ORIGIN OF LOANS: HOFMARK MASSENHAUSEN (OBERBAYERN)
1750 - 1848

Type of Creditor	%	
	1750-1799	1800-1848
deposits	3.6	1.3
relatives	1.1	0.7
ecclesiastical	61.3	46.8
seigneurial	10.2	1.3
individual	23.8	26.2
charitable institutions	—	15.6
institutional (banks)	—	5.5
miscellaneous	—	2.6
	100.0	100.0

(W.R. LEE, *op. cit.*, p. 272.)

and members of the aristocracy rose from 3 (1822-29) to 23 (1840-49). To encourage this type of investment distinct incentives were often necessary in order to break the hold of traditional investment/consumption patterns. A preferential treatment of capital income provided one crucial means of achieving this end and the fiscal systems of many individual German states thereby contributed an important factor to solving the problems of capital supply.

Finally something more must be said of the structure and form of indirect taxes. The theoretical advantages of a tax system in a developing economy weighted towards indirect taxation, where the terms of exchange between present and future consumption are more favourable to the latter

⁵⁹ W.G. HOFFMANN, *Das Wachstum der deutschen Wirtschaft seit der Mitte des 19. Jahrhunderts*, Berlin, Heidelberg, New York, 1965, p.

and the possible reward for savers will be high, have already been cited. At the same time the over-reliance on indirect taxes could have had certain short-term disadvantages.

Confined to a small number of commodities, indirect taxes could be discriminating and lead to a distortion of choice between different types of consumption. The "Trunksteuer" of Sachsen-Meiningen, for example, was a consumption tax on wine, beer and brandy, which was replaced after entry into the Customs Union by separate taxes of brandy (1831), wine and tobacco (1833) and beer (1839). In Prussia the "Accise" of 1641 was originally levied on corn, meat, certain drinks and imported goods, although with increasing financial needs it had been extended in 1763 to include "foreign" wines, beer, brandy and butter and in 1766 by an increment of 1 *pfennig* per lb. on better quality meat. By 1807 a rate of 12 *taler* 12 *groschen* per ton of salt was particularly high.⁶⁰ In terms of the development of consumption the form of the "Accise" in most German states could be criticised for affecting basic commodities. By raising the final cost of commodities to the consumer, where demand tended to be price-inelastic, the net effect would have been to impair labour efficiency and reduce the margin of excess income which could have been spent on consumer articles being produced by the more progressive and technically advanced sectors of industry (such as the cotton manufacturing branch). Indeed the tax Commission in Berlin (25 January 1787) had been aware of this danger, and attributed the deterioration in living standards and morality to the high level of excise levies, the "milling tax" (of 2 Groschen per Scheffel) and the "slaughter-tax".

Although indirect taxes included those levied on the consumer, those charged on a group of manufacturers and those collected at the frontier, their general effect was often to discourage the maximisation of existing export potential. In the city of Esslingen, for example, the high excise on export wines had stifled expansion in the late 18th century.⁶¹ In terms of state revenue this was counter-productive, in that lower production and export levels implied lower revenue yields. Production of spirits, beer and sugar in Prussia amounted to c. £ 12.8 m. in 1889/90 and according to a contemporary observer « . . . they are deficient in just those articles that form the mainstay of British and French finance ».⁶² Equally according

⁶⁰ K. MAMROTH, *Geschichte der Preussischen Staats-Besteuerung, 1806-1810*, Leipzig, 1890, p. 395.

⁶¹ G. LUKAS, *Die Finanzwirtschaft der Freien Reichstadt Esslingen im Spiegel der Umgelter-Rechnungen der zweiten Hälfte des 18. Jahrhunderts*, Diss. Erlangen-Nürnberg, 1968, p. 62. This was typical of most German states, particularly in the 18th century - cf. E. KREIS, *Die Grafschaft Baden im 18. Jahrhundert*, Schweizer Studien zur Geschichtswissenschaft, Zurich, 1909, p. 365.

⁶² C. F. BASTABLE, *op. cit.*, p. 495.

to a Prussian Cabinet Order of 1811, the raising of the tobacco tax in 1787 had adversely affected production, necessitating the introduction of tax restitution.⁶³

Indirect taxes were furthermore particularly heavy in urban centres. The general excise of Brandenburg (1640) had been limited to towns. In Anhalt it had been initially introduced in the city of Zerbst in 1700 and by mid-century it produced from all the cities of Anhalt, Nienburg and Gärten 41,500 *taler* whose contribution to the land tax was limited to 8,800 *taler*.⁶⁴ Although the 19th century witnessed an attempt to equalise the relative balance of direct/indirect taxation between urban and rural areas (as in the Prussian legislation of 1811), the basic distinction continued. Whether there will be a net positive or negative effect of indirect taxation will largely depend on the relative importance of income and substitution effects. Given the economic infrastructure of most German states in the 19th century, it was always likely that duties on articles of widespread consumption may have simply encouraged persons to return to a subsistence economy. Indirect taxation concentrated in urban areas may well have retarded the growth of towns by exacerbating their high cost situation. In Bavaria, for example, even as late as 1890, only 23% of the population lived in urban areas.⁶⁵ The problems associated with indirect taxation are mirrored in two late 18th century reports from Munich. If on the one hand an additional 3-4 *gulden* per *zentner* on the production costs of sugar made its sale unprofitable, a calculation by Angelo Balladini (1786), on the other hand, estimated that excise payments constituted 22% of net costs.⁶⁶

High indirect taxation rates also influenced trade development. In Prussia the excise was regarded as one of the causes for the decline of urban beer and brandy brewing, which adversely affected the volume of transit trade. In Saxony, despite continuous opposition to the fiscal road and bridge tax, the 450 collection posts were not disbanded until 1885, when increased revenue receipts from the state-supported railway network and surplus payments from the Reich enabled the state to take such a step without a loss in income.⁶⁷ At the same time, although certain aspects of indirect taxation were obviously harmful to trade expansion, as reflected in the

⁶³ K. MAMROTH, *op. cit.*, p. 493.

⁶⁴ G. SCHANZ, *Die Steuern im Herzogtum Anhalt, ihre Entwicklung und neueste Reform*, Finanz Archiv, 1887, p. 969.

⁶⁵ W. GOTZ, *Geographische-Historisches Handbuch von Bayern*, Munich, 1889, p. 62.

⁶⁶ M. EDLIN-THIEME, *Studien zur Geschichte des Müncher Handelstandes im 18. Jahrhundert*, Forschungen zur Sozial- und Wirtschaftsgeschichte, Bd. II, Stuttgart, 1969, p. 104.

⁶⁷ G. SCHANZ, *Die Aufhebung des fiskalischen Chaussee- und Brückengeldes im Königreich Sachsen*, Finanz Archiv, 1884, pp. 837-8.

1760's in the dispute between Prussia and the Hansa town of Hamburg,⁶⁸ it does not appear to have hindered a long-term expansion of the trading/commercial sector. Despite heavy excise dues, the late 18th century marked a considerable expansion of trade in Prussia. Exports from the old provinces and Silesia rose from 22.5 m. *taler* (1752) to 51.5 m. *taler* (1795/6). The number of Prussian ships passing through the Sound also increased from an average of 2,300 (1769/74) to 2,012 (1804).⁶⁹ In Baden yields from consumption taxes rose by 586.0% (1850-1900), although the corresponding overall growth rate in population was only 36.9%. Indirect tax receipts in Bavaria increased by 383% (1819/25 - 1889) despite a population growth rate throughout most of the 19th century well below the national average.⁷⁰ To this extent the theoretically adverse effects which high indirect taxes might have had on the development of trade and marketing do not appear to have been operative. If any disadvantages did accrue, they were more likely to have been in a relatively slower rate of increased trade and consumption than might otherwise have been optimally possible, under a different taxation system.

Any realistic final appraisal of the significance of the tax structure in the process of economic/industrial growth in Germany in the period 1750-1850, however, must take into consideration not only the balance and nature of individual specific taxes, but also a multiplicity of other factors, such as the expenditure use of tax receipts, the general principle of taxation in terms both of fiscal equity and economic necessity, and the overall effect of the taxation system on attitudes to work and work supply.

According to Hoffmann, the state was created to meet the needs of its citizens and not vice-versa.⁷¹ If the levels of increased state revenue in the period 1815-63 are examined, however, this might have appeared otherwise [Table 9]. The justification for increased receipts depended on the extent to which the policy of individual states led to resource reallocation to development sectors of the economy, from which long-term benefits could have been expected. Such a perspicacity was not always visible.

⁶⁸ H. LIEBEL, *Laissez-faire vs. Mercantilism: The Rise of Hamburg. The Hamburg Bourgeoisie vs. Frederick the Great in the Crisis of 1763*, Vierteljahrsschrift für Sozial- und Wirtschaftsgeschichte, 1965, pp. 207-238.

⁶⁹ G. SCHMOLLER, *Die Epochen der preussischen Finanzpolitik*, Jahrbuch für Gesetzgebung, Verwaltung und Volkswirtschaft im deutschen Reiche, Leipzig, vol. I, 1877, pp. 68, 79.

⁷⁰ W. BURKHARD, *op. cit.*, p. 128. Statistisches Jahrbuch für das Deutsche Reich. 33. Jahrgang, 1932. Between 1816-1864 only Württemberg of the major German states had a population growth rate below that of Bavaria.

⁷¹ HOFFMANN, *Lehre von den Steuern*, Berlin, 1840, p. 30. Cited by A. HELD, *Die Einkommensteuer*, Bonn, 1872, p. 50.

TABLE 9.

THE RISE IN STATE INCOME IN INDIVIDUAL GERMAN STATES: 1815-63

(in Francs)

State	Income		Percentage Increase
	1815	1863	
Bremen	1,000,000	5,800,000	480
Hamburg	3,750,000	13,400,000	252
Frankfurt a. M.	1,880,000	6,180,000	227
Anhalt	3,700,000	11,900,000	222
Hanover	24,400,000	74,800,000	206
Mecklenburg-Strelitz	1,070,000	3,100,000	198
Oldenburg	3,000,000	8,100,000	170
Prussia	187,000,000	516,600,000	149
Schwarzburg	2,300,000	5,300,000	134
Mecklenburg-Schwerin	5,600,000	12,060,000	113
Lübeck	940,000	2,020,000	112
Nassau	5,450,000	10,900,000	100
Sachsen-Altenburg	1,500,000	3,000,000	100
Hessen-Cassel	9,800,000	19,100,000	95
Sachsen-Meiningen	1,900,000	3,606,000	90
Baden	19,500,000	36,800,000	87
Saxony	25,000,000	46,500,000	86
Waldeck	970,000	1,630,000	70
Sachsen-Weimar	3,750,000	6,200,000	65
Württemberg	20,900,000	33,800,000	61
Hessen-Homburg	500,000	810,000	60
Hessen-Darmstadt	12,500,000	19,200,000	56
Lippe	1,200,000	1,700,000	41
Sachsen-Coburg-Gotha	3,300,000	4,500,000	36
Bavaria	75,600,000	103,000,000	33
Braunschweig	5,600,000	6,250,000	11

(from O. HAUSNER, *Vergleichende Statistik von Europa*, Lemberg, 1865, pp. 309/10.)

Military expenditure often entailing non-productive investment, remained considerable. In Bavaria it averaged in peace-time years in the 18th century 1.2 m. *gulden*, from a total budgetary expenditure of 3.8 m. *gulden*. Barrack construction costs resulting from a policy of garrisoning additional troops under the Kurfürst Joseph (1745-77) produced a further increase in expenditure.⁷² In Prussia expenditure on military personnel rose from

⁷² E. SCHREMMER, *op. cit.*, pp. 252-6.

2½ m. *taler* (1713) to 16-17 m. *taler* (1806).⁷³ According to Hansemann's estimate of 1833 the average cost of maintaining the armed forces stood at 1 *taler* 9 *groschen* in France, as against the significantly higher figure of 2 *taler* per head in Prussia.⁷⁴ In other cases, however, state expenditure took a far more constructive form. In Berlin, to cite but one example, the construction of state factories to the value of 9 m. *taler* (1761-82), later sold at below-cost prices to private entrepreneurs, reduced the initial level of fixed capital required by the private sector. In addition the state supplied c. 2.5 m. *taler* working capital (1740-86).⁷⁵ Where the state did undertake this positive investment role (whether directly or indirectly) the tax system effectively acted as a means of redistributing one of the key factors of production to developing sectors of the economy. Infrastructural investment in external economies (including transportation and communication facilities, and general educational training), prominent in many German states during this period, similarly provided a further incentive for profitable private investment.

The capacity-to-save concept postulates that aggregate savings can be increased by means of tax transferences from those who are most inclined to save to those whose savings propensity is slight. Effectively the community's savings ratio can therefore be raised without any need to alter or influence the savings-ratio of any individual, provided high savers are given command over a larger fraction of available resources.⁷⁶ Although such a postulate depends on a close correlation of persons with a high average saving propensity and those with a high marginal saving propensity, the savings ratio does tend to rise with income. In this context the tax structure of many early 19th century German states was optimally designed to raise the level of aggregate savings. Key direct taxes, such as the *Gewerbsteuer* and the capital income tax, favoured either large-scale concerns, or individuals in the higher income-bracket groups. The haltingly slow acceptance of the need for a comprehensive income tax meant that the tax system of many states during the crucial period of "take-off" (1830/5 - 1855/60) was regressive rather than progressive. Even where a partial attempt was made to apply concepts of proportional taxation, as in the Prussian Class tax of 1820 and Income Tax of 1851, implemented with the intention of reaching «... the

⁷³ A. ZOTTMANN, *Die Wirtschaftspolitik Friedrichs des Grossen*, Leipzig and Vienna, 1937, p. 73.

⁷⁴ G. SCHMOLLER, *op. cit.*, p. 97.

⁷⁵ H. KRÜGER, *Zur Geschichte der Manufakturen und der Manufakturarbeiter in Preussen*, Berlin, 1958, *passim*.

⁷⁶ R. GOODE, *Taxation of Savings and Consumption in Underdeveloped Countries*, *National Tax Journal*, 1961, p. 307.

various classes of taxpayers according to a gradation resting on a few easily visible criteria» (Ministerial Ordinance, 1820),⁷⁷ the system remained deficient. The weight of taxation remained on the lower classes, with only 346 individuals enrolled in the highest tax group of the Class tax in 1846 and the wealthiest citizen liable to the income tax able to avoid the modest contribution by remaining in a large city for 1 day longer than half a year. Accurate assessments were in any case prevented by the official ruling that «... vexatious inquiry into the income or property conditions of the taxpayer» was to be avoided.⁷⁸ J.P. Hasl's view (1816) that «... progressive taxation is not only against all justice, but against the nature of things»⁷⁹ still held sway. In the majority of states progressive income taxes were not introduced until the last two decades of the 19th century. Sachsen-Weimar was probably the forerunner with its tax system of 1876/7 embodying progressive rates of ½ - 4%. In Württemberg advocates of comprehensive income taxation (such as Pfeiffer and Andererl) were out-manoeuvred by traditionalists and in Baden, after the rejection of reform proposals in 1874, an income tax was finally introduced in 1884 (described as «... the strongest measure of social reform for years...»)⁸⁰ In Sachsen-Meiningen adequate reforms came in 1890. Given the absence of a progressive tax structure the increase in income inequality in the post "take-off" period becomes explicable. In Prussia, for example, the share of the top 20% rose from 48-50% (1875-1913) and that of the top 5% from 26-30%.⁸¹ This followed, of course, Adam Smith's prognosis that «... money... makes money. When you have got a little, it is often easy to get more».⁸² If it is accepted, however, that only the upper income groups save and that total savings of groups below the top decile are fairly close to 0, then the tax structure of most German states during the development years of the 19th century was sensitively suited to the promotion of economic growth, specifically in the producer goods industries. By neglecting problems of equity the tax system was able to meet some of the more major requirements of the economy.

Similarly a fundamental assumption behind taxation is that any increase in assessment will produce a fall in aggregate work supply.⁸³ This reaction,

⁷⁷ E.R.A. SELIGMAN, *The Income Tax. A Study of the History, Theory and Practice of Income Taxation at Home and Abroad*, New York, 1914, p. 229.

⁷⁸ *Ibid.*, p. 240.

⁷⁹ E.R.A. SELIGMAN, *Progressive Taxation in Theory and Practice*, Publications of the American Economic Association, Vol. IX, Nos. 1 and 2, Baltimore, 1894, p. 106.

⁸⁰ A. BUCHENBERGER, *op. cit.*, p. 161.

⁸¹ S. KUZNETS, *Quantitative Aspects of the Economic Growth of Nations*, Distribution of Income by Size. Economic Development and Cultural Change, 1963, p. 59.

⁸² A. SMITH, *The Wealth of Nations*, Book I, Chapter 9.

⁸³ G. F. BREAK, *Income, Taxes and Incentive to Work: an Empirical Study*, American Economic Review, Sept. 1957. pp. 529-49; National Tax Journal, 1953, *passim*.

however, is dependent on how rapidly the marginal utility of income increases as income itself decreases. The more rapid the increase, the more likely it is that additional taxation will result in additional work. One of the further advantages of the German tax structure lay in the fact that whereas lower income groups respond in many cases with an additional effort to maintain existing living standards (including the integration of more family members into a structured work process), increased taxation of upper income groups, with accumulated assets, low debt obligations and a smaller number of dependents, seldom results in an increased work output. The prominence of indirect taxes and the structure of most direct taxes would then have promoted work incentive in the lower classes of German society, without involving a deterrent to continued activity by entrepreneurs and estate owners.

No individual system of taxation in 19th-century German, however, was perfect. Officials seldom, if ever, viewed the problems of taxation in terms of an optimal tax revenue to GNP ratio and the impression of taxation development during this period is one of a pragmatic approach to the reality of increasing state expenditure requirements. In particular the tax structure of individual states can be criticised on three grounds:

Firstly, in terms of efficiency of administration and cost of assessment, states such as Bavaria, Hessen-Cassel, Mecklenburg and Baden had some of the most expensive tax systems in the mid 19th century [Table 10].

TABLE 10.

PROPORTION OF GROSS TAX RECEIPTS SPENT ON ADMINISTRATION
AND ASSESSMENT
(average%: 1859/61)

State	%	State	%
Papal States	28	Württemberg	13
Bavaria	23.5	Nassau	12.5
Hessen-Cassel	23	Prussia	11.9
Mecklenburg	22.5	Holland	11.1
Austria	21.8	Russia	10.8
Oldenburg	20	Belgium	10.4
Baden	19.2	France	10.3
Braunschweig	18.1	Sachsen-Weimar	9
Switzerland	17	Frankfurt a. M.	8.9
Hessen-Darmstadt	16.9	Lübeck	8.7
Hanover	16.5	Bremen	8.0
Sweden	15.5	Hamburg	7.5
Saxony	14	Denmark	6.4
Anhalt	13	U.K.	4.2

(O. HAUSNER, *op. cit.*, pp. 425-26.)

Secondly, both the over-emphasis on indirect taxation and the form of the land tax left something to be desired in terms of a tax structure most effectively attuned to the needs of economies of individual states. Although the fact that the ratio of reproducible fixed capital to land was small, meant that a substantial weight of direct taxation had inevitably to fall on land, reliance on the land tax often exceeded the bounds of economic rationality. Certainly in the 1820s and 1830s (as well as during the depression of the 1770's), with depressed prices in the agricultural sector affecting other branches of the economy and reducing aggregate demand for capital,⁸⁴ a different emphasis in the tax system, perhaps designed to stimulate in the short-term consumption rather than further saving may have been a more effective way of promoting economic growth.

Thirdly, preferential treatment of capital income, despite its obvious advantages, was in any case a crude means of stimulating effective investment, given the lack of state control over the investment distribution of the additional capital supply. The financial bonanza which accrued to landlords in the first half of the 19th century from peasant emancipation legislation, for example, did not go towards financing industrial development, but was largely concentrated in secure and stable investments, including additional land purchase and government securities.⁸⁵ Given a wide spectrum of income utilization open to owners of capital, including conspicuous consumption, preferential treatment of capital income did not by itself ensure an improved distribution allocation of this important factor of production.

Taxes may influence the functioning of an economy in many different ways, some easily recognizable and others more subtle and complex. The imposition of a tax may alter the relative attractiveness to taxpayers of different kinds of economic pursuits or may induce changes in the spending and saving pattern of producers and consumers, thereby affecting the level and composition of national product. Much too little is known about the actual effect of specific tax measures on the savings and investment decisions of individuals and concerns in the various German states, both in the late 18th and 19th centuries. Perhaps with the gradual collation of statistical data for individual territories it might be possible to isolate the effect of changes in tax structure and the incidence of specific taxes on some of the more important variables influencing aggregate economic growth during

⁸⁴ K. BORCHARDT, *Zur Frage des Kapitalmangels in der ersten Hälfte des 19. Jahrhunderts*, Jahrbuch für Nationalökonomie und Statistik, Bd. 173, 1961, pp. 407-409.

⁸⁵ H. WINKEL, *Die Ablösungskapitalien aus der Bauernbefreiung in West- und Süddeutschland*, Stuttgart, 1968, *passim*.

this period. What hopefully does emerge from this paper is the general extent to which the comparative tax structure of individual German states during the period under consideration did effectively influence both the pace and direction of economic development. The taxation structure and the relative distribution and assessment of taxation form one of the key aspects of any society. Further examination of the interrelationship between tax structure and the process of economic growth would undoubtedly repay further investigation.