

1-2000

# The Politics of Numbers: Zemstvo Land Assessment and the Conceptualization of Russia's Rural Economy

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## eCommons Citation

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Accepted version

David W. Darrow. "The Politics of Numbers: Zemstvo Land Assessment and the Conceptualization of Russia's Rural Economy." *The Russian Review* 59(1), January 2000: 52-75. ISSN: 0036-0341 DOI: <http://dx.doi.org/10.1111/0036-0341.0010> Copyright © 2000, Russian Review.

Historians of statistics are only beginning to understand the politics of numbers that accompanied the rise of statistical thinking in the nineteenth century.<sup>1</sup> In the Russian empire, this statistical awakening opened numerous possibilities for state servitors and the intelligentsia. To officials in St. Petersburg, especially the enlightened bureaucrats who shaped the Great Reforms, statistics held out the promise of providing hard data for the development of informed policies. For educated society, numbers had a profound impact on debates over the nature of Russia's rural (particularly peasant) economy. Numbers provided a cloak of objectivity for polemics motivated by different visions of the empire's present and future.<sup>2</sup> In trying to express rural life in numbers, bodies charged with collecting statistical data at various administrative levels had to contend with the fact that numbers are not naturally occurring objects. In measuring, observers convert various phenomena into "stable, mobile and combinable elements" of knowledge that can be used to assess, conceptualize and control.<sup>3</sup> During this process of constructing numerical representations the agendas and biases of the measurer emerge in the choice of method, the creation of categories, and the presentation of data. The tendentiousness of numbers originates in the very process of measurement. Thus, measuring can itself be an inherently political act and controlling the measurement process--the process of constructing numerical representations--becomes a question of power. These are the politics of numbers.

A controversy surrounding zemstvo land assessment stands as one case of the politics of numbers in late imperial Russia.<sup>4</sup> On the surface, assessing the value of a piece of property

would appear to be a simple matter of measuring its income potential by subtracting production costs from income (both measured in market prices), and using the average for a number of years as a norm. However, making such a determination presupposes a classical conception of the nature and structure of an economy. What happens when parties involved in the assessment process have different conceptions of the economy's defining characteristics--when some aver that the aim of all producers is to maximize profit and others maintain that not all producers operate according to this principle? How do you determine income or value (or how to measure them) when the nature of the economy is itself a matter of dispute?

Questions such as these lay at the center of a dispute over land assessment which pitted statisticians employed by Russia's zemstvos against both the Ministry of Internal Affairs (MVD) and Sergei Iu. Witte's Ministry of Finance (MF).<sup>5</sup> This battle was, above all else, a conceptual battle over the nature and future of Russia's rural economy. St. Petersburg officials saw numbers as an efficient and scientific method of imperial bookkeeping that laid bare the empire's wealth in land and human productivity. From the perspective of this cadastre paradigm, they viewed Russian agriculture as homogeneous enough to be represented in aggregate figures based on market prices, regardless of the identity of the tiller. For zemstvo statisticians, however, the farmer's identity was a crucial assessment factor. Attempting to understand the internal workings of peasant society, they focused on the population itself--its mode of production and social conditions. Using this perspective, they came to view agriculture not in homogenous terms, but through a paradigm of peasant difference. Average market figures assumed a harmony of economic interests and motivations (profit); their own data revealed that the peasants' "natural economy" operated on its own principles, devoid of profit in the common sense of the term. Fair assessment, they argued, required evaluative tools (household inventories and budget studies) that accounted for the "social factors" believed to reflect this structural difference. The con-

trasting outlooks of state officials and zemstvo statisticians precipitated a struggle for control over statistical work at the end of the nineteenth century--a struggle for authority over the statistical image of peasant economic activity--from which zemstvo statisticians emerged with limited success.

### **Competing World Views: Zemstvo Statisticians, the MVD, and the MF**

Statisticians employed to perform tax assessment work for Russia's zemstvos produced the world's greatest compilation of statistics on any peasant society. The story of zemstvo taxation is in large part the story of these statisticians' quest for a general theory of peasant economy--a general explanation of the socio-economic processes at work in the Russian village. "The object of statistics," Saratov statistician S. A. Kharizomenov (1854-1917) noted in 1886, was "to reveal empirical laws of social phenomena" which could be expressed in numbers. Kharizomenov and others who turned to a more scientific pursuit of the peasant after the political failures of the 1870s (Kharizomenov was a founder of "Land and Freedom") hoped that their research would yield statistical laws of peasant behavior that would stand as scientific proof that the Russian peasant commune (*mir* or *obshchina*) was a viable alternative to capitalist development.<sup>6</sup> Zemstvo tax assessment work provided an ideal opportunity to collect data relevant to this task. Distinctions between assessment and research quickly became blurred.

What they discovered, however, contradicted many of their preconceptions of the peasant economy and the commune. Nearly two decades of extensive research (c. 1875-1894) convinced many zemstvo statisticians that Russia's peasant economy was neither communal nor capitalist. The peasant economy was a distinct type--a natural economy concerned with balancing household subsistence needs rather than communal interests or ledger books. Peasant economic behavior could be categorized neither as "inherently socialist" nor in terms of classical political

economy. Many statisticians--following their mentors Professors A. I. Chuprov and N. A. Kابلukov--continued to believe that the commune might be a useful basis for establishing cooperatives, or that, once cleansed of the corrupting influence of state tutelage, the communal organism would once again function in an ideal fashion.<sup>7</sup> However, most zemstvo statisticians had to admit that the peasant's economic world did not revolve around the commune, but around the individual household and its struggles to eke out a living within what they called a natural economy. This household-centered view of the peasant economy became the norm as debates among statisticians over how to statistically represent peasant landholdings (allotment size vs. sown area) revealed the fact that allotments comprised only a small component of peasant farming activity in many areas.<sup>8</sup> In place of the older communal and profit-oriented models of peasant economic behavior, zemstvo statisticians (foreshadowing Aleksandr Chaianov's theory of peasant economy) posited a subsistence economy in which the peasant household produced with its own labor and inventory and consumed most (if not all) of what it produced.<sup>9</sup> From the statisticians' perspective, these characteristics of the peasant economy--the heterogeneity implicit in the household's management of labor and capital and its subsistence nature--structurally distinguished it from its profit-oriented pomeshchik counterpart. V. I. Orlov's study of Moscow province was the first to point in this direction--toward this paradigm of peasant difference.<sup>10</sup>

When it came to assessing land, this structural difference meant that the value of a piece of plowland might rest more on how farmers from different social groups and different elements within groups utilized the land (the farmer's social origins) than on soil quality and market forces. Land values thus had a social component; in one and the same place the income from a unit of arable land in economies of different types might not be the same. The only way to reveal this difference between natural and capitalist economies, zemstvo statisticians argued, was to adopt a method of measurement that did not obscure the distinctive features of the peasant economy.

Because of their experience in studying particular localities in detail, zemstvo statisticians decried the use of average figures on harvests, production costs, and market prices compiled by state agencies. They believed that such figures obscured environmental and economic variations that existed not only within provinces, but sometimes even within districts. More importantly, influenced by the German Historical School's critique of nineteenth-century social statistics (especially criticism of Adolphe Quetelet's "average man"), zemstvo statisticians concluded that market figures and ill-considered aggregation also obliterated differences between the peasant and pomeshchik economies and between peasant households with substantially different ways of organizing production.<sup>11</sup>

Averages derived from data on peasant and pomeshchik economies--or even from peasant economies within an entire district or province--were not proper averages from these statisticians' standpoint because they were calculated from measures of different phenomena. Such averages were the equivalent of the average weight of apples and oranges. They hid what zemstvo statisticians called "social factors" (land held, rented and sown, types of arable available, usual crop rotations, numbers of livestock, draft animals and workers, household budget information, etc.) relevant to individual households' unique balancing of production and consumption--the distinguishing characteristics of the peasant economy. Any measure and assessment of land values would thus have to avoid the pitfalls of aggregation. What was needed, they believed, was a more "microscopic" level of research. For this reason, zemstvo statisticians insisted that the proper numbers for assessing land could only be obtained by an inventory or census (*podvornaia perepis'*) of each peasant household and (especially after about 1890) detailed household budget studies.<sup>12</sup> These methods became the norm of zemstvo research, and were seen as the only way to ensure that peasant lands were taxed fairly.

The zemstvo statisticians' view of a structurally distinct and heterogeneous peasant economy challenged the conception of rural Russia found in the corridors of the Ministry of Interior during the counter-reform period (1880s-1890s). The heart of the counter-reforms centered on MVD attempts to instill order in the countryside by bolstering the commune and what was seen as the traditional patriarchal relationship between the nobility and the peasantry--what Macey has labeled "official populism." As Wcislo indicates, this was an attempt to mediate the social transformation of rural Russia. Laws regulating family divisions and the sale of peasant allotment land were intended to preserve the commune as a bulwark of rural stability. The land captain statute of 1889 and the 1890 zemstvo counter-reform were intended to restore the local nobility to its traditional place as mediator between the administration and peasantry. Order and the commonweal would persevere through the maintenance of traditional roles and legal categories.<sup>13</sup>

On the one hand, it would seem that zemstvo statisticians and the MVD were not so far apart. Future Minister of Internal Affairs V. K. Pleve's view that the "peasant way of life" and its "peculiar culture" sharply distinguished the peasantry "from the culture of the other classes of the population" was one that would have elicited few objections from statisticians and other members of the intelligentsia.<sup>14</sup> However, whereas zemstvo statisticians attributed this difference to the peasants' distinctive use of labor and capital, the MVD saw the difference as essentially legal--a product of traditional communal institutions. Denying the sort of structural difference that zemstvo statisticians believed they were documenting, the MVD (and later the United Nobility) argued that the economic interests of the peasantry and its noble benefactors were one--that there was in essence a single, organic rural economy.<sup>15</sup> In addition, where zemstvo statisticians posited a heterogeneous peasant economy, the MVD tended to see the peasantry and its economic activities as a homogeneous mass. As MVD official V. I. Gurko noted, Pleve believed

that “as a social factor all peasants--rich and poor, landowners and members of communes--were alike.”<sup>16</sup>

From this perspective, a cadastre serves as a paradigm for the MVD’s view of the rural economy, as it rests on a similar set of assumptions: the homogeneity of economic actors within, and the commonality of economic interests between, legal categories of the rural population. A cadastre would consist of a list of land parcels and their average income over a given period calculated from average harvest data for various grains on various types of soil, average market prices for production costs, and average market prices for agricultural commodities. The primary variable in determining value was the land itself; human activity was assumed to be sufficiently homogeneous that anomalous instances could simply be averaged away as error. For the MVD, given its view of a single rural economy rooted in the commonality of peasant and pomeshchik economic interests and its conception of a homogeneous communal peasantry, compiling a cadastre was more than adequate for assessing the value and income of land. The MVD’s advocacy of the cadastre as a method for measuring rural society reveals the ideological tightrope that the ministry walked in its efforts to secure its vision of a legally ordered rural Russia. On the one hand, the cadastre accorded well with the views outlined above. On the other hand, assigning the spot of prime variable to land by averaging away human activity was but one step away from the democratic dissolution of legal categories.

For the MVD, the zemstvo statisticians’ advocacy of actual work among the peasantry and the use of the individual household as the primary unit of research had strong political overtones. Zemstvo statisticians drew the attention of the police very early in their careers. Pleve’s view was representative. The state and local nobles, not “politically unreliable” persons, were supposed to be the conveyors of enlightenment and mutual assistance to the peasantry. Not only were zemstvo statisticians another “Third Element” challenge to central authority, but their con-

ception of the peasantry as a collection of heterogeneous individual households unconnected to their paternalistic pomeshchik neighbors stood as an open challenge to the MVD's whole conception of rural society. Furthermore, their insistence that the peasantry be taxed fairly (i. e., less), meant that in the realm of zemstvo taxation--where taxes were based on an apportionment (*raskladka*) rather than on the basis of actual income--someone would have to pay more. Generally what this meant was that the pomeshchiki who figured so prominently in the MVD's vision of rural society would see their tax burden increase. The statisticians' work to alleviate the consequences of insufficient allotments collided with MVD concern over the crisis in pomeshchik agriculture. This, as Stanziani notes, was an open point of contention between statisticians and their zemstvo employers.<sup>17</sup> It also underlay the tension between statisticians and the MVD.

The Ministry of Finance had an agenda partially at odds with both the zemstvo statisticians and (as is well known) the MVD.<sup>18</sup> Throughout the counter-reform period the MF assumed not a particularistic, but a universalistic position that envisioned a Russia stripped of the cumbersome and archaic estate (*soslovie*) system--particularly the separateness of the peasantry embodied in communal land tenure. A society without separate private and communal land tenure, the MF believed, would create conditions for the prosperity of all. The commune and traditional peasant maladies were all that prevented Russia's peasants from going from rags to riches according to their talents. Witte had few qualms about the market devouring pomeshchiki unable to compete and viewed the commune as, at best, a useful tool of past administration. Thus, for reasons quite different from those of the MVD, Witte and MF officials also embraced the cadastre as the proper method of land assessment. Not only did it promise to regularize receipts and ease the pressure of zemstvo taxation on trade and manufacturing enterprises; the cadastre also met the ministry's general tax reform goals of shifting taxes from persons to objects (including land). In addition, the assumption behind a cadastre--the homogeneity of economic activity--fit

well with its vision of a society where legal distinctions did not impede rational economic choice.<sup>19</sup>

Yet, while operating out of a basic cadastre framework, the MF also saw advantages in the assessment methods championed by zemstvo statisticians. On-the-spot research was essential to ensure a correct inventory of fields, an accurate accounting of production costs, and the correct assignment of assessments to individual pieces of property. An equitable distribution of the district's tax burden based on income--as opposed to its alignment with local political power--would ultimately enhance the well being of society as a whole. From this perspective, the MF saw zemstvos with statistical bureaus that diligently sought out and verified relevant data as the only ones assessing taxes in a manner that even remotely approximated the legal stipulation to tax real estate according to its value and income. In this case, the MF believed, zemstvos could provide order in undergoverned provinces. Therefore, in the midst of the counter-reforms, the zemstvo tax statute of 1893 (largely a MF product) put the right of representing the value (prosperity) of various sectors of the rural economy not on the shoulders of a state institution, but on those of the zemstvos and its statistical bureaus.<sup>20</sup> The ensuing battle over assessing land values thus had roots in the diverse conceptions of, and aspirations for, rural (especially peasant) Russia.

### **Zemstvo Taxation and the Tax Statute of June 8, 1893**

For nearly thirty years (1864-1893) zemstvo taxation (and state land tax receipts connected to it) existed in a nebulous and, from the government's position, unsatisfactory condition. This chaotic state stemmed from a lack of specific government instruction, the vagaries of local politics, weak administrative structures, and a shortage of information. The post-emancipation basis of local taxation appeared in a set of temporary rules enacted in 1864 as part of the zemstvo reform.<sup>21</sup> Because zemstvos were to be comprised of elected representatives from all social es-

tates, the framers of the zemstvo legislation allowed great latitude in determining how the provincial tax burden should be apportioned; the zemstvo assembly could "define how much was needed from one or another district for the satisfaction of provincial needs more honestly and more justly" than local representatives of the state.<sup>22</sup> The "Temporary Rules on Zemstvo Obligations" that accompanied the statute allowed zemstvos to tax land, forests, urban real estate, places of trade and manufacturing, district dwellings, and documents related to trade and manufacturing (Article 9). The "value and income of the taxable property," or earning potential, was to be the exclusive basis of taxation (Article 11). The temporary rules offered few suggestions as to how value and income potential were to be determined except for Article 15, which obligated the zemstvo to "define accurately the quantity of land held for each urban and rural community, as well as each individual landholder (including treasury, crown and other similar lands)." This endeavor was to result in a "detailed list of lands in the possession or permanent use of communities, and those belonging to private landholders"--in other words, a cadastre. Beyond this, the statute and rules left the method of defining value and income to the zemstvos' discretion.

However, the State Council had also feared that, unless specified by law, "important propertied interests" on zemstvo governing boards would tax properties to their own benefit. Thus, when it approved the zemstvo statute in 1864, it also resolved to periodically review zemstvo taxation. When the statute's lack of precise direction led to complaints about zemstvo assessments, officials exercised this clause by convening a review commission under the auspices of Deputy Finance Minister P. N. Nikolaev in 1885. Evidence of pomeshchik tax evasion and the rapid growth of zemstvo budgets (with a corresponding increase in zemstvo taxation) particularly disturbed commission members. As the MVD attempted to strengthen and improve communal life, it found the potential increases in peasant tax burden implied by larger zemstvo budgets alarming. The MF had its own concerns. In addition to a fear that growing zemstvo budgets

were diverting potential revenue from the State Treasury, pomeshchik tax evasion meant that a greater proportion of the tax burden fell on manufacturing enterprises, which the MF hoped would prosper.<sup>23</sup> In addition, tax evasion worried the MF because of the link between state land tax receipts and zemstvo assessments; the more property that the zemstvos taxed, the more the state received. Connected to this, the lack of standardization in assessing zemstvo taxes, as well as the sometimes capricious nature with which zemstvos assessed various forms of real estate, frustrated financial officials who sought regularity in the State Treasury's income. Lack of standardization meant that in cases where zemstvo figures seemed excessively large or small, the MF was obliged to solicit additional information from the provincial administration--a time consuming task that did not necessarily lead to a more accurate picture of land values.<sup>24</sup>

Lack of standardization was a particularly nettlesome problem. As Finance Minister S. A. Grieg noted in 1879, zemstvo assessments were so varied that "even in districts in one and the same province" there was "no unity in the system of taxation." Variation in tax rates and methods of assessment among provinces had created a situation in which the tax burden in some provinces was significantly higher than in others. For example, the Kostroma and Penza provincial zemstvos had nearly equal budgets in 1885 (975 and 998 thousand rubles respectively), but raised this money from property valued at 242 million rubles in Penza and 92 million rubles in Kostroma; tax rates in Kostroma province were thus nearly three times higher.<sup>25</sup> The methods of assessing taxes were even more diverse and problematic than the tax rates, especially when it came to assessing land. About one third of all districts in 1879 taxed all land (plowland, hayfields, meadows, gardens, etc.) at a flat rate regardless of productivity.<sup>26</sup> Another third of Russia's zemstvos assessed land on the basis of the redemption payments assigned as part of the emancipation process, figures that had been controversial from their inception.<sup>27</sup>

The remaining third of Russia's zemstvos were actually attempting to assess the "value and income" of land as directed, but only a handful of these zemstvos had devised a "rational system of taxing land."<sup>28</sup> Included in this handful were three zemstvos that used systematic programs of statistical investigation for property assessment: Chernigov, Moscow, and Tver'. The methods they developed in the 1870's--especially the so-called "Moscow type"--spread as other zemstvos created statistical bureaus in the 1880's. In simple terms, tax assessment in these zemstvos consisted of two parts. First, statisticians divided each district by type of land tenure (individual or communal) and, tentatively, by type of arable (hayfield, plowland, garden plot, etc.). The most arduous aspect of the project then followed, as statisticians traveled throughout each district, interviewed individual landowners, and determined soil type and average harvests for each unit on their map. In this way, taking into consideration soil quality and land use, they determined the value (in terms of income potential) of one *desiatina* (approximately 2.7 acres) of land.

As the review commission examined the work of these innovating zemstvos, it appeared to its members that these zemstvos were constructing a cadastre. However, for statisticians such as Moscow bureau chief, V. I. Orlov, tax assessment was a commission secondary to "purely statistical work"--the task of culling a theory of peasant economy from piles of collected assessment data.<sup>29</sup> As it evolved, the Moscow system involved breaking down each village in the entire province into its component parts--individual households--and collecting a variety of data (allotment size, number of livestock, number of workers, access to pasture, land rental, sowings, harvests, etc.) on each household. Use of this detailed household inventory became the norm for zemstvo research. By the beginning of 1894, zemstvos had published household inventory results for all or part of one hundred seventy-one districts--studies which encompassed nearly sev-

enty thousand villages, nearly four million peasant households, and over twenty-three million persons of both sexes.<sup>30</sup>

Zemstvo statisticians believed that only this method could account for the variety of peasant households they encountered, and provide a detailed statistical portrait of each cell of the communal organism. As members of the Statistical Department of the Moscow Juridical Society concluded in 1887, "complete household-by household research [a *podvornaia perepis*'] of the peasant economy" was "*necessary* as the basis of all zemstvo statistical-economic works."<sup>31</sup> Furthermore, they became convinced that only this method provided data sufficiently detailed to tax peasant land fairly (i.e., to take into account variation in household resource use and the structurally distinct nature of the peasant household economy). Averages could be useful. However, as an advocate of statistical research, Prince A. I. Vasil'chikov, explained, while average figures might "demonstrate the relationships of various subjects of economy and wealth," when it came to individual inhabitants, averages were more apt to "give false conclusions." An "objective" understanding of the peasant economy could be had only by preserving the individuality of households in the research process--each household's individual use of land, labor and capital.<sup>32</sup> The line between research and assessment blurred, as statisticians became increasingly committed to their own view of the peasant economy and their own method of measurement.

However, ignorant of the issues embedded in zemstvo statistical work of the Moscow type, members of the review commission applauded the use of statistical data and zemstvo statistical programs in their plan for a new statute.<sup>33</sup> According to their proposal, district tax commissions (in conjunction with the zemstvos) were to devise a project for the division of all lands into categories and define average income based on the analysis of harvest, commodity price, wage, and other statistical data collected throughout the district (i. e., compile a cadastre).<sup>34</sup> Noting the desirability of continued zemstvo involvement in local tax assessment, the MF reminded the

State Council that statistical bureaus were "well-established in many zemstvo governing boards," and that their staffs contained "many individuals specially prepared for leading this aspect [of taxation]."<sup>35</sup> The government incorporated these recommendations into both the new tax statute of June 8, 1893, and into rules on zemstvo taxation issued by the MF on June 4, 1894.<sup>36</sup>

The new tax statute reiterated the principle that all real estate subject to zemstvo taxation was to be taxed solely on the basis of its average income as defined by a specified proportion of its value (Article 9). It stipulated in general terms how zemstvos were to assess each type of property. Land and forests were to be assessed based on their average income over the previous nine years (Article 11). For arable land, this figure was to be determined by defining the average net income of one *desiatina* of each soil-type category of each type of land throughout the district (i. e. plowland, hayfields, garden plots, etc.). Zemstvos were to base these calculations on a variety of data, including measures of soil productivity, production costs and commodity prices; only in the absence of this sort of data were incomes to be extrapolated from rental and sale prices (Articles 12, 13 and 14).<sup>37</sup> In short, the text of the statute stipulated that all zemstvos now needed a statistical basis for tax assessments.

The Ministry of Finance's 1894 "Instructions" for zemstvo taxation added detail to the general stipulations contained in the law. They also highlighted the importance of data collection in the tax assessment process and provided a legal place for zemstvo statistical bureaus within the new assessment process. Article 15 contributed the most to enhancing the authority of existing and future zemstvo statistical bureaus by authorizing both district and provincial zemstvos to make use of "specially invited individuals" to gather necessary tax assessment data; the practice of hiring professional statisticians now had some legal footing. Besides this, an addendum stated that "in order to ease the task of district zemstvo governing boards," the provincial zemstvo assembly could "commission the collection and analysis of assessment data in all districts of the

province to a special statistical department or bureau under the auspices of the provincial zemstvo's governing board." Article 16 stated that data for defining property values could be obtained through consultation of local administrative documents, the distribution of questionnaires, "and also by means of the interview of property owners on the spot." Article 48 supported zemstvo methods more plainly by insisting that the average income of land be determined by "on-the-spot research." In addition, Articles 115-118 gave the local tax commission the power to both determine the need for local statistical studies and devise the program of that research.

Thus, with a stroke of his pen, Finance Minister Witte and the compilers of the "Instructions" ensconced zemstvo statisticians as authorities on tax research. The right of representing the value (and hence prosperity) of various sectors of the provincial economy fell not on the shoulders of a state institution (such as the MVD's Central Statistical Committee), but on the shoulders of the zemstvos and their statistical bureaus. In contrast to other counter-reform legislation (and the usual interpretation of this period as one of declining zemstvo authority), the new zemstvo tax statute empowered local authorities and professionals.<sup>38</sup> However, St. Petersburg officials were unaware that relying on zemstvo statisticians would require them to buy into a conception of rural Russia substantially different from their own--be it the MVD's vision of a homogeneous peasantry linked to its pomeshchik benefactors in a single rural economy or the MF's desire for a Russia free of particularism. The "Instructions" made no specific reference to the household inventory method, and Article 36 specifically prohibited considering any specific sort of economy (peasant or pomeshchik) in assessments. This was a hint of problems to come, as the article implied the sense of the cadastre paradigm--that farming was farming. Nonetheless, zemstvo statisticians viewed the statute and "Instructions" as an official sanction of their methods and point of view. The implementation of the statute thus became increasingly contentious.

### **Zemstvo Statisticians and the Statute of June 8, 1893**

The new tax statute created an arena where zemstvo statisticians could continue investigating the nature of the peasant economy and attempt to enforce peasant-oriented research agendas and their authority as experts behind a shield of legality. They first defined their relationship to tax assessment under the new rules in a specially convened statistical subsection of the Ninth Congress of Russian Naturalists and Physicians.<sup>39</sup> N. F. Annenskii's presentation, "Zemstvo Cadastre and Zemstvo Statistics," most clearly defined the zemstvo statisticians' position on the new statute. As Annenskii noted, tax research was not simply a question of broad economic research versus property assessment, but one of the collection and analysis of data reflecting the economy "as a process of agricultural production in the widest sense of the word." Tax assessment required a sociological, rather than physiocratic, approach. It was to be a broad investigation reflecting the differences between economies producing for the market and the "natural economy" of the peasant.<sup>40</sup>

Accomplishing this task required not only a consideration of environmental factors influencing productivity (soil type, fertility, drainage, climate, etc.), but also "social factors" best measured by statistical means. He then repeated what had emerged as the zemstvo statisticians' standard formulation of the issue. The value of a piece of plowland rested as much on the nature of the tiller, and his unique balance of labor and capital, as it did on environmental conditions. Thus, the statistician should "expand the circle of his observation and capture within it...all of the most important groups of natural and social factors influencing the path and general results of agricultural production and conditioning the income of land."<sup>41</sup> The list of social factors critical to the definition of income (and hence value) included population, family composition (number of workers and non-workers), number of draft animals, land tenure and land use, tillage methods,

agricultural commodity supply and demand, sowings and harvests, payments or other obligations levied on land and landholders, and information about the peasant household budget.<sup>42</sup>

The collection of these data, Annenskii noted, was the only way to ensure that all taxpayers, especially peasants, were assessed fairly. According to his interpretation of the statute, the assessment of land was not concerned with the actual average income of a given category of land, but in the derivation of its normal income under average economic conditions. Thus, in order to ensure that a natural economy (one in which "the land is worked by the owner himself and his family at a cost not fixed by the market price of labor, an economy in which the main mass of products go not for sale, but for the demands of the producers themselves"), and an economy of the capitalist type were assessed fairly, the statistician needed to recognize in his research methods and analyses a distinction such that both would be assessed not according to the actual average income of a certain type of land, but according to the normal income of that land under conditions average for each of their distinct types of economies.<sup>43</sup>

The household inventory method was the only way to ensure that data crucial for considering the unique attributes of the peasant economy would be taken into consideration.<sup>44</sup> Annenskii joined a popular chorus in and out of government which emphasized that rental prices were an unfair indicator of land values given land-short peasants' common practice of renting *pomeshchik* lands at inflated prices; rental prices were artificially high and did not reflect the land's real income under peasant tillage. "Thus," Annenskii stressed, "before establishing assessment conclusions on the basis of rent or sale prices for land," it was necessary to "understand thoroughly the general conditions of land tenure and land use, the systematic study of which must follow upon the questions of the population section of the assessment program." You could discover the extent to which rent and sale prices were skewed only by interviewing the peasants themselves.<sup>45</sup> Furthermore, only a detailed inquiry into the household economy (including its budget) would

indicate what level of monetary income those commodities produced beyond the needs of consumption brought to the household--the value of those products consumed and those sold for cash.<sup>46</sup> The fairness and success of zemstvo tax assessment, then, depended on the statistician's right to collect such information by means of the household inventory.

These two propositions--the natural, as opposed to capitalist, nature of the peasant economy and the necessity of using household inventories to account for this distinction--persisted at the center of professional discussion throughout the rest of the 1890's. A rising number of budget and consumption studies further highlighted the fact that peasant economic behavior was substantially different from that of pomeshchiki--that Russia had not one rural economy, but two. Papers presented to a convocation of zemstvo statisticians in 1898 by zemstvo activist and statistician A. V. Peshekhonov illustrate this point. The Moscow Juridical Society organized this meeting for the specific purpose of discussing Peshekhonov's work on Kozel'skii district (Kaluga province). More generally, this group was once again to discuss the relationship between zemstvo statisticians--their methodology and concerns--and tax work, this time in light of the MF's proposal to review and amend the 1893 statute. The gathering reaffirmed the statisticians' commitment to the household inventory method and budget studies as the best way to factor the peculiarities of the peasant's natural economy into land assessment.

Zemstvo statisticians found the 1894 "Instructions" inconsistent. As Peshekhonov noted, the Ministry of Finance had specified land as the unit of assessment, stipulating that it be assessed according to its average net income. The ministry did not define "net income" in specific terms, but Article 26 of the statute did stipulate that net income was to be figured by subtracting expenses from income, or, in other words, by considering the entire household economy as the unit of taxation. This appeared to give statisticians plenty of room to consider the structural peculiarities of the peasant economy. However, Article 36 contradicted this by prohibiting consid-

eration of the specific type of economy (peasant, noble, etc.) in figuring land values.

Peshekhonov, however, believed that the weight of authority rested with Article 26, which implied that net income could not be determined by consideration of land alone--"its size and quality"--but only in relation to land and capital. Within this context there was "a full basis to propose that in one and the same place the income of a unit of arable in economies of different types and sizes might not be the same."<sup>47</sup> According to Peshekhonov, assessment did not rest exclusively on the land itself, but on the economic unit as a whole. This was not, of course, the only possible interpretation, but it was the interpretation most accepted by those in charge of the data--zemstvo statisticians.

Given what Peshekhonov saw as the legal and scientific necessity of considering the social relationships between land, labor and capital in land assessment, he set out to explore them in his research. The results were surprising, and confirmed his belief in both the necessity of considering the household economy as a whole when figuring assessments, and in the need to consider consumption as well as production. Peshekhonov began by calculating the income of land by the cadastre method indicated in the "Instructions," that is by deducting expenses (based on market prices for labor and capital) from income (based on the sale of the entire harvest at market prices) for peasant household economies of various sizes (defined by sown area).<sup>48</sup> In analyzing the results, he noticed that the relationship of capital and labor to sown area was more favorable for smaller households (in terms of sown area), which tilled the soil and manured significantly better than larger ones. In addition, smaller households also tended to plant higher-valued crops. This resulted in a situation where "if peasant economies worked all their land with hired labor and capital, and disposed of all of their produce at market prices, then the lands of the smallest households yielded a significantly higher income [per unit of land] than those of larger households."<sup>49</sup>

However, echoing Annenskii, Peshekhonov quickly pointed out that this was not a market-driven, but a "natural" economy. "In reality," he noted, "almost all products produced are not disposed of, but consumed by the household itself, and almost all work is fulfilled by its own livestock and inventory, and by its own labor force--not by hired ones." Furthermore, on the basis of a detailed inventory and budget study of incomes and expenditures of money, labor and produce in his 1,313 sample households, it was apparent that the market prices for labor, horses, and manure were significantly less than the actual cost to the household economy.<sup>50</sup> Ignoring the fact that assigning monetized values to items in the peasant budget was just as arbitrary as the assumptions behind the official calculation method (plus the fact that these figures were themselves based on the market value of labor) Peshekhonov proceeded to do just that. Ultimately, greater expenditures of labor (necessitated by household consumption needs) translated into discrepancies between market values and actual household costs. While the market value for one *pud* (approximately 36 pounds) of manure was 0.9 kopeks, the actual cost to peasant households was 1.4 kopeks. The market price for a day's use of a horse was 38 kopeks; the same cost peasant households 58 kopeks. Finally, the market price for one day's human labor (the cost of feeding one worker for a day) was 26 kopeks, but the cost for the peasant household was 39 kopeks.<sup>51</sup> Profit as determined by market prices apparently was not a motivation for peasant farmers.

These figures were averages for the entire sample. In terms of sown area, costs were higher for smaller farms than for larger ones, even though the income per unit of plowland was "higher in the first instance than in the second." Thus, if the market value of labor, draft animals, inventory, and manure was deducted from the household's gross income, this would yield a net income significantly higher than the actual net income. Actual net income should instead be calculated by deducting the household's actual costs, not the average market value of these costs. Such a calculation, Peshekhonov argued, would reveal that the peasantry was left with "almost

no net income in the legal sense."<sup>52</sup> In other words, Peshekhonov's study of the actual costs of production accruing to the household as the result of the production and consumption of nearly the entire product revealed the key to understanding the oddities of the peasant economy which had eluded statisticians for twenty years: the peasant household economy was one of subsistence, not a profit-oriented market enterprise. Thus, Peshekhonov implied that the manner of calculating income advocated by the state (which considered the rural economy as a whole and ignored "social factors") gave distinct tax advantages to private landholders (who produced for the market) in comparison to peasants (who produced for themselves). He stated this explicitly at a follow-up meeting hosted by the Free Economic Society in 1900.<sup>53</sup>

Throughout the rest of his report, Peshekhonov outlined most of the fundamental understandings about the structure and functioning of the peasant economy which would eventually be incorporated into the work of Aleksandr Chaianov and the Organization and Production School: the notion that, for the peasant family farm, the amount (market value) of the labor expended was not as important as the income yielded by its expenditure; the increase in land-use intensity as the size of available sown area decreased; and, the relationship between the need for some farms to farm intensively in the face of decreased sown area (which results in high labor costs to the household) and the ability of other farms to farm extensively (which makes off-farm labor profitable in relation to the cost of labor in one's own household). In short, through the use of budget study and household inventory data Peshekhonov demonstrated that the peasant economy operated in a fashion which could be generalized as non-capitalist but which was heterogeneous in its subsistence strategies.<sup>54</sup> Having explained the peculiarities of peasant agriculture, Peshekhonov concluded by calling for the meeting to recognize that these peculiarities made it necessary to both: 1) collect a detailed compendium of economic data (preferably by means of a complete house-by-house inventory); and 2) verify land assessments done in the usual manner (deducting

production costs based on market prices from the market prices of commodities produced) with a detailed analysis (budget study) of the peasant household's actual production costs--the production costs accruing to an economy which reproduces itself without benefit of hired labor and which consumes all it produces. Commission members concurred, and continued to press this agenda even in the face of state attempts to regulate zemstvo statistical research.<sup>55</sup>

### **Conceptions Collide**

Zemstvo statisticians thus recognized two types of economies in rural Russia--the natural economy of the peasant household and the capitalist economy of the pomeshchik estate--and wished to assess the value of their lands differently. However, Petersburg officials were unwilling to look at economic issues outside the parameters of either the commune or classical economics. For this reason, the battle over land assessment methods was not simply a typical political dispute over local versus central authority, but a conceptual battle over the nature of Russia's rural economy--the conceptions of rural Russia posited by zemstvo statisticians, the MVD and the MF.

The key to understanding this conflict is in the types of numbers acceptable to servitors in these ministries. Numbers generated by zemstvo statisticians were instantly suspect in the eyes of the MVD. The ministry's antipathy toward zemstvo professionals in general, and statisticians in particular, is well known. V. K. Pleve carried his suspicion of zemstvo statisticians with him throughout his career--from head of the police to Minister of Internal Affairs. Pleve and others (with some justification) suspected statisticians of being "politically unreliable persons" who could not be trusted amongst Russia's supposedly impressionable peasant population. Officials viewed household inventory programs suspiciously because they entailed a lot of contact between statisticians and peasants. The MVD was convinced that the influence of statisticians would not

have the same edifying effect as that of local pomeshchiki. Thus, the ambiguities of the 1893 tax statute (and 1894 Instructions) notwithstanding, when governors failed to prevent some "undesirables" from working amongst the peasantry, the MVD issued an 1887 circular requiring its Central Statistical Committee (CSC) to approve all zemstvo statistical research. The 1895 law enacting the first imperial census gave the MVD an excuse simply to ban most household inventories.<sup>56</sup>

But the desire to limit contact between statisticians and peasants was not the only reason that the MVD sought to restrict the use of household inventories. As the CSC maintained in its denial of the Tula zemstvo's 1896 petition to carry out a household inventory, the proper assessment program was not to be "the result of a desire to clarify the general conditions of provincial economic life," as this problem was "significantly broader than the definition of the income and value of land for a correct division of zemstvo taxes."<sup>57</sup> In the words of the CSC's provincial arm, the Tula Provincial Statistical Committee, the zemstvo's assessment program contained questions that were not only contentious, but also "unnecessary for the needs of tax assessment."<sup>58</sup> In rejecting the Tula zemstvo's program as overly complex, the CSC and Tula Provincial Statistical Committees were also rejecting the idea that social factors--and thus the heterogeneity and peculiarities of the peasant economy--had any bearing on land value.

For the CSC and MVD, land had an objective value independent of the tiller's social status; land was land, no matter who farmed it. As such, this value could be assessed adequately with a limited number of average figures, i. e., by compiling a cadastre. As Pleve argued, this was the intention of the 1893 statute, which had been modeled on the French system.<sup>59</sup> Thus, in contrast to the zemstvo statisticians' "social factors" the primary variable for the MVD was the land itself. Differences were defined in terms of, and seen as attributable to, legal distinctions such as that between communal and private land. When the government collected sowing and

harvest statistics, it did collect data by social estate. In part, this was simply a reflection of a certain ingrained "soslovie-mindedness." This tendency was clearly in evidence when, confronted with the fact that many peasants held land that could not be counted as allotment land (and thus, had no column in the forms for recording sowing and harvest data), the CSC was initially at a loss as to how to proceed. It also reflected both the constraints of peasant literacy and the state's perennial concern with the condition of peasant agriculture.<sup>60</sup> However, even though government agencies collected data by social estate, the primary assumption when it came to taxing land was that every farmer operated in a sufficiently homogeneous way such that individuality could safely be subsumed in average production figures. In other words, agriculture was agriculture.

This is not to say that the MVD and the CSC were oblivious to the fact that the peasant economy was different and operated outside market boundaries. Statistical studies ordered by the Commission on the Decline of Prices for Agricultural Products (published by the CSC in 1889) noted that data on production costs had "only a theoretical meaning" for the peasant economy, where "mainly personal labor" played a primary economic role. Thus, "figures indicating losses [i. e., the same sorts of losses highlighted in Peshekhonov's work] in one or another province and for one or another cereal" could only be considered losses "if the peasant hired labor to work his land."<sup>61</sup> As such, the author dismissed them as an anomaly that reflected peasant backwardness--not the actual cost of production. "Using the figures from this work," he noted, "it is necessary to bear in mind that by force of the striving of any economy, by one or another means, to reduce the costs of producing grain as much as possible, the *lowest* cost is the nearest to the actual cost of working land in any case."<sup>62</sup> In other words, it was assumed that this was the aim of all producers; as such, market prices were the best indicators of what was seen as the normal human pursuit to rationalize economic activity. Ultimately, in spite of the MVD's "soslovie-

mindedness," human economic activity was homogeneous enough to be aggregated for the purpose of calculating production costs and, it follows, land values.

The positions of the MVD and the MF emerged more systematically in discussions over revisions to the 1893 statute and 1894 "Instructions." By 1898 it was apparent to both Finance Minister Witte and Minister of Internal Affairs I. L. Goremykin that the 1893 statute had not achieved the desired effect of regularizing the process of zemstvo tax assessment. In spite of efforts by MVD officials to paint this failure in terms of zemstvo incompetence, the State Council agreed with Witte that the main difficulty stemmed from a lack of zemstvo resources to pay for the involved process of property assessment mandated in 1893. Goremykin grudgingly acquiesced. A supplementary statute on zemstvo taxation enacted on January 18, 1899 stipulated that the State Treasury would now allocate a million rubles annually for zemstvo assessment work.<sup>63</sup>

It is clear, however, that Goremykin's belated approval of state financing for zemstvo tax work in no way signified MVD support, or even comprehension, of zemstvo statisticians and their household inventory method. In fact, Goremykin's 1899 proposals for a new set of "Instructions" on zemstvo taxation indicate that he saw little need to interview individual landholders, especially where the existence of communal land tenure meant that peasants held their land as a group.<sup>64</sup> Seeing the rural economy as essentially homogeneous, Goremykin believed that average figures on wages, sowings, harvests, and land values compiled by state institutions, such as the provincial statistical committee, the local treasury branch, local state banks, or the township administration provided an adequate representation for tax work. Household inventory data related to sowings, manure application, harvests and land rental were superfluous detail from this point of view. Research programs should be limited to state needs and the needs of property assessment. This would include questions pertaining to the compilation of a detailed list of inhabited places, the size of the population of each inhabited place by sex, the amount of land of each type

for each landholder, and the number of livestock--information already (in principle) available in official records.<sup>65</sup> In short, Goremykin sought to limit investigations to questions necessary for compiling a traditional cadastre. When the Moscow zemstvo petitioned for permission to carry out a household inventory in the same year, Goremykin and the CSC expressed doubt that agricultural conditions in Moscow province varied enough to justify this sort of program.<sup>66</sup>

In contrast to the MVD, Witte's Ministry of Finance had always carried some sympathy with zemstvo statistical methods. During the 1898 discussions of zemstvo tax work, Witte himself noted that he had "no argument" with the "complete surveys produced in several zemstvos by the expeditionary method." He even believed it to be the "most convenient" method for gathering detailed and accurate assessment data, "especially in those areas in which there are significant differences in the conditions of land tenure and land use."<sup>67</sup> This support for zemstvo methods stemmed from both practical and conceptual considerations. On a practical level he noted that, while current zemstvo research practices were not necessary for deriving the assessment norm (market prices would suffice for this), they were absolutely essential for assigning this norm to individual pieces of property. In addition, zemstvo researchers also collected other data of state importance (lists of inhabited places, population counts by sex, inventories of properties, numbers of livestock, etc.), and did so at a minimal cost to the State Treasury. Finally, Witte noted that in its discussion of the 1893 statute the State Council had (in what was surely a move to protect a conservative vision of lord and peasant) specifically excluded the use of rental and sale prices in tax assessment; such data were too often influenced by "arbitrary" factors. If such figures had been suspect then, why would they be less so now? The household inventory method was thus the surest way of collecting accurate data on agriculture and, from Witte's perspective, a guarantee that the regressive sector of the economy (agriculture in general) would not stifle the

development of trade and manufacturing by foisting the bulk of the local tax burden on to the shoulders of entrepreneurs.<sup>68</sup>

On a conceptual level, Witte's support for the household inventory reflected his broader vision of Russia's economic future: a rural Russia populated not by peasant and private land owners, but by individual farmers who, unhindered by legal chains, would rationally pursue profit. To the extent that zemstvo methods emphasized a consideration of discreet taxable units, they served the purpose of cutting across soslovie lines. Yet, like the MVD, Witte saw economic activity as homogeneous enough to be reflected in average figures based on market prices. While in principle defending the household inventory, he made no mention of the use of budget studies (so crucial to the zemstvo statisticians' conception of peasant difference) and, without listing examples, agreed that tax research programs should be purged of superfluous questions. In addition, he specifically noted that "in regions with more or less uniform natural and economic conditions," local surveys were not absolutely necessary.<sup>69</sup> The primary variable was the land and the type of economic activity it allowed, not the unique characteristics of the tiller. From this perspective, Witte's willingness to use the household inventory method was not a show of sympathy with the zemstvo statisticians' conclusions, but of his view that it was the most effective means for constructing and maintaining an accurate cadastral system of taxation in an empire with extremely varied farming conditions. Neither the MVD's legal categories, nor the zemstvo statisticians' "social factors" were to take the place of soil type and market as the determining factors in his vision of rural Russia.

When V. K. Pleve became Interior Minister in 1902, he continued to press the view that Russia's rural economy was sufficiently homogeneous as to be representable in aggregate (market) figures. Pleve also vigorously questioned the authority of statisticians outside of the central government to conduct tax research, and--especially after zemstvo statisticians were implicated

in peasant disturbances during 1902--sought to place all responsibility for taxation in the hands of the central government.<sup>70</sup> Central administration of the tax system, Pleve believed, would eliminate many of the problems associated with Russia's system of "elected persons" and their employees. Zemstvo tax revenues would be transferred to the state budget, and the zemstvos would receive an allowance from the state for administering their programs.<sup>71</sup>

In making a case to Witte for a government take-over of local property assessment, Pleve characterized zemstvo work as a litany of failure. By 1901, 143 of Russia's 359 zemstvo districts had yet to begin tax work.<sup>72</sup> Most blame for the delay, Pleve argued, lay in overly complex zemstvo research programs. Like Goremykin, Pleve also drew a distinction between data necessary for tax work and the "extraneous" data collected by zemstvo statisticians. The minister contended that, rather than being content with collecting only data necessary for tax assessment, the zemstvos had set for themselves "the even larger task of producing a complex economic-taxation survey of all real estate." This "excessive complexity," he asserted, had led to the situation where zemstvos had "not only not devised a general basis for taxation," but had "not even finished the collection of data for the assessment of land."<sup>73</sup> To Pleve, the "complexity" that zemstvo statisticians saw as essential to tax research was a superfluous impediment pursued for suspect purposes.

The task of evaluating Pleve's complaints and proposals fell to an inter-ministerial conference that met in December and January of 1902-1903. The conference rejected Pleve's plans to place local tax work under direct state control largely due to MF officials' successful demonstration of both the financial impossibility of creating a centralized system and the fact that financial and bureaucratic (i. e., MVD) impediments had slowed zemstvo work.<sup>74</sup> However, given the political climate and the qualified nature of MF support for zemstvo statistical methods, conference members and Witte's successor, V. N. Kokovtsov, were inclined to make some conces-

sions to the MVD. These concessions were finally codified in a set of new "Instructions" on zemstvo taxation issued in 1905.<sup>75</sup> The new "Instructions" represented both success and failure for zemstvo statisticians. Articles 89 and 117 increased the voice of government representatives in local tax matters by giving the provincial tax commission the right to approve programs of research and requiring local tax inspectors to sit on district tax commissions. Local representatives of the State Treasury and other departments who had already been antagonistic to the idea that peasant and pomeschchik land should be assessed differently now had a bureaucratic advantage over statisticians.<sup>76</sup> In addition, Articles 23, 25 and 26 stated in specific terms that average net income for land was to be calculated by subtracting expenses from gross income, with both calculated in terms of local market prices (as opposed to budget study data on the household's actual costs). Article 28 allowed rental and sale data to be used where it existed in sufficient quantity and where collecting other data would present particular difficulty.

These articles constituted a rebuttal of the zemstvo statisticians' argument that average figures obscured important differences between the peasant and manorial economies. Even though the new "Instructions" still gave zemstvo statisticians wide latitude over the collection of data, emphasis on the use of average local market prices for calculating production costs and harvest value dictated that land be assessed in a manner zemstvo statisticians viewed as disadvantageous to peasant farmers. From their perspective, peasants would undoubtedly be taxed unfairly because the method of measurement did not reflect the divided nature of Russia's rural economy. This is not to say that zemstvo statisticians ever had it within their power to alter substantially the fact that peasant land carried a tax burden more than seven times that of pomeschchik land (around 40% of net income); only the abolition of redemption payments (which, while not technically a tax, constituted the bulk of peasant obligations) after January 1, 1907 would make a significant change in the peasant payment burden.<sup>77</sup> But, zemstvo statisticians did have the power

to hold zemstvo collections from land (which were a key component of most zemstvos' finances and constituted a sizable part of total payments)--peasant land in particular--in check.<sup>78</sup>

In principle, the new rules made realizing this potential power difficult, and the ultimate losers, then, appeared to be peasant taxpayers. However, zemstvo statisticians soon began to find ways around the new official constraints. Although the rules mandated the use of market prices when figuring production costs, in many cases these sorts of data (the cost of manure, especially) simply did not exist. Statisticians thus had little choice but to use more detailed research--especially budget studies--to calculate production costs. In addition, some statisticians were able to convince tax commissions that the restricted use of these types of studies provided a good check on assessments derived from market prices.<sup>79</sup> They also began to innovate. Article 90 demanded that all research programs correspond to the level of monetary resources available. But in many cases (as in Peshekhonov's study of Kozel'skii district), time and money constraints had already pushed statisticians to use sampling. Article 90 accelerated this trend, and also produced statisticians to consider how data already available (including that from state agencies) might be corrected so as to provide an idea of "normal" production costs and harvest sizes rather than "subjective averages."<sup>80</sup> Finally, Articles 97, 117, and 119 still placed responsibility for collecting assessment data in the hands of the zemstvo and its "specially invited persons"--zemstvo statisticians. Kokovtsov and Pleve both agreed that setting assessed values would require assistance beyond the capabilities of local tax inspectors, and that they should be allowed to hire "politically reliable" zemstvo statisticians for this purpose.<sup>81</sup> From the perspective of researchers attempting to pursue their agenda without interference, the new rules certainly constituted a "crisis of zemstvo statistics."<sup>82</sup> Nonetheless, zemstvo statisticians had become an integral and irreplaceable part of the taxation process.

## Conclusion

Within the context of tax assessment, zemstvo statisticians tried both to reveal the internal structure of the peasant economy and to ensure that its structural differences were fairly considered in the assessment of land. From the standpoint of the economic beings described in zemstvo statistical works, the Russian peasant was a creature from another world whose actions could not be predicted on the basis of a view of economic behavior as profit-driven. This discovery (a paradigm of peasant difference) carried with it certain methodological demands--specifically a sociological approach to statistics in which people and the organization of their labor were the primary variables studied. The individual household, not the commune, thus emerged as the primary unit of research during the nearly four decades that elapsed between the beginnings of zemstvo statistical activity and the emergence of the Organization and Production School.

However, the conclusions zemstvo statisticians drew from these numbers--the notion of a heterogeneous peasant economy, centered on the household and structurally distinct from the capitalist endeavors of pomeshchik neighbors--presented a conception of the rural economy substantially at odds with those of the MVD and the MF. In spite of the rivalry between these two institutions, they both conceptualized Russia's rural economy in similar universalistic and homogeneous terms--in terms of a cadastre paradigm. The MVD's vision of the countryside as a particularistic society of estates blended the economies of lord and peasant on the basis of imagined mutual interests. Another universalistic assumption--the homogeneity of peasant farming--led it to subsume peasant agriculture into one legal (communal) category. It also viewed human economic activity as profit driven (the "irrational" behavior of peasants could be discarded from calculations). Combined with concerns about the decline of pomeshchik agriculture, and a deep suspicion of zemstvo statisticians, all of these issues led the MVD to advocate a cadastre--a

measure in which land, not people, served as the primary variable. From this perspective, average market prices were sufficient measures of economic activity that could be applied to the economies of peasant and pomeshchik alike. Conceptually, however, the MVD was trapped. The construction of a traditional cadastre reflected the assumed commonality of rural interests and promised to limit the activities of zemstvo employees. But the MVD's advocacy of a cadastre system that incorporated a series of universalistic assumptions was drastically at odds with its own fundamental vision of a rural society comprised of particularistic estates.

The MF--especially under Witte--shared the MVD's universalistic assumptions, but for very different reasons. MF officials shared the view of human economic activity as profit driven with their counterparts in the MVD. Yet, for the MF the cadastre was not a tool for maintaining a particularistic *soslovie* society, but a step in the direction of dismantling its remaining vestiges. The assumptions behind a cadastre--namely the idea that all human economic activity is sufficiently homogeneous to be averaged--neatly encapsulated Witte's vision of rural Russia in which the absence of archaic legal categories would facilitate the rational direction of the economy by all actors--peasant, pomeshchik and state. For this reason, Witte also saw value in zemstvo statistical programs in so far as a carefully constructed household inventory provided the most rational means of assessing property and ensuring that all property was assessed on the same basis. The zemstvo statisticians' "expeditionary method" also provided some guarantees that recalcitrant economic interests in rural Russia (the pomeshchik patrons of the MVD) could not overburden productive sectors of the economy at the expense of progress. In short, the zemstvo statisticians represented for Witte the best means of constructing a cadastre and, ultimately, of breaking down the traditional legal/power structures in the countryside that the MVD treasured.

This example of the politics of statistical measurement demonstrates the key role that numbers played in shaping perceptions and politics in late imperial Russia. The dispute over

zemstvo land assessment was more than a matter of state versus zemstvo, professional autonomy, and the question of who would pay what taxes. While these straightforward concerns were certainly present in the minds of all the participants, they ultimately played a secondary role in the struggle. For within this battle over how to count, the image of rural Russia--past, present and future--was at stake. This is especially true for the final decades of the old regime when, as the empire sought a course into the twentieth century, a growing volume of statistical information occupied an increasingly prominent place in discussions of its future.<sup>83</sup> From this perspective, understanding how one measures (broadly defined) becomes as crucial as the resultant figures themselves.

## NOTES

I would like to thank the ACTR-State Department Program for Research Scholarship in Russia and the University of Iowa Department of History for their financial support of this project.

Thanks are also due to Steve Hoch, Scott Seregny, Yanni Kotsonis, and the anonymous readers and editors at *The Russian Review*. Their comments greatly improved the manuscript. All errors, of course, are my own.

<sup>1</sup> Theodore M. Porter, *The Rise of Statistical Thinking, 1820-1900* (Princeton, 1986); idem, *Trust in Numbers: The Pursuit of Objectivity in Science and Public Life* (Princeton, 1995); Joshua H. Cole, "The Power of Large Numbers: Population and Politics in Nineteenth Century France" (Ph.D. diss., University of California-Berkeley, 1991); Carl Ipsen, *Dictating Demogra-*

phy: *The Problem of Population in Fascist Italy* (Cambridge, 1996); Silvana Patriarca, *Numbers and Nationhood: Writing Statistics in Nineteenth-Century Italy* (Cambridge, 1995).

<sup>2</sup> W. Bruce Lincoln, *In the Vanguard of Reform: Russia's Enlightened Bureaucrats, 1825-1861* (DeKalb, 1982); Esther Kingston-Mann, "Breaking the Silence: An Introduction," and "Peasant Communes and Economic Innovation: A Preliminary Inquiry," in Kingston-Mann and Timothy Mixer, eds., *Peasant Economy, Culture and Politics of European Russia, 1800-1921* (Princeton, 1991), 3-51 (hereafter Kingston Mann and Mixer, eds.); idem, *Lenin and the Problem of Marxist Peasant Revolution* (Oxford, 1983); Elvira M. Wilbur, "Peasant Poverty in Theory and Practice: A View from Russia's 'Impoverished Center' at the End of the Nineteenth Century," in Kingston-Mann and Mixer, eds., 101-27; A. Walicki, *The Controversy over Capitalism: Studies in the Social Philosophy of the Russian Populists* (Oxford, 1969); and several of the essays in Roger Bartlett, ed., *Land Commune and Peasant Community in Russia: Communal Forms in Imperial and Early Soviet Society* (New York, 1990).

<sup>3</sup> Paul Starr, "The Sociology of Official Statistics," in William Alonso and Paul Starr, eds., *The Politics of Numbers* (New York, 1987), 47; Bruno Latour, *Science in Action: How to Follow Scientists and Engineers through Society* (Cambridge, MA, 1987), 224.

<sup>4</sup> See also Stephen P. Frank, "Narratives within Numbers: Women, Crime and Judicial Statistics in Imperial Russia, 1834-1913," *The Russian Review* 55, no. 4 (October 1996), 541-566; Alessandro Stanziani, "Statisticiens, zemstva et État dans la Russie des années 1880," *Cahiers du Monde russe et soviétique* XXXII, no. 4 (October-December 1991), 445-68.

<sup>5</sup> At times, zemstvo statisticians also had to fend off assaults from their employers. The politics of local property assessment were complex and varied by region. As such, they are a topic too vast to be treated within the context of this piece. See Stanziani, "Statisticiens...des années 1880"; N. M. Pirumova, *Zemskaiia intelligentsiia i ee rol' v obshestvennoi bor'be do nachale XX v.* (Moscow, 1986); Robert E. Johnson, "Liberal Professionals and Professional Liberals: The Zemstvo Statisticians and Their Work," in Terence Emmons & Wayne Vucinich, eds., *The Zem-*

*stvo in Russia: An Experiment in Local Self-Government* (Cambridge, 1982); B. B. Veselovskii, *Istoriia zemstva za sorok let*, 4 vols. (St. Petersburg, 1909-1911); Ivan Goronovich, "Dva zemskii statisticheskiia uchrezhdeniia: Khersonskoe biuro i Chernigovskoe otdelenie pri gubernskikh upravakh," *Otechestvennye zapiski*, no. 6 (1879) 207-242; V. E. Khizhniakov, *Vospominaniia zemskago deiatelia* (Petrograd, 1916), 150-151; *Vestnik Evropy*, no. 3 (1883), 375-376; *Bibliograficheskii obzor zemskoi statisticheskoi otsenochnoi literatury so vremeni uchrezhdeniia zemstv*. Vyp. I. Sost. V. F. Karavaeva (St. Petersburg, 1906); P. P. Firsov, *Polozhenie otsenochnykh rabot po zakonu 8 iuniia 1893 goda v Permskom zemstve* (Perm', 1899).

<sup>6</sup>*Sbornik statisticheskikh svedenii po Saratovskoi gubernii*. T. V. *Khvalynskii uezd* (Saratov, 1886), III; *Deiateli revoliutsionnogo dvizheniia v Rossii. Biobibliograficheskii slovar' ot predshestvennikov dekabristov do padeniia tsarizma*. Sost. A. A. Shilovym & M. G. Karnaukhovoi (3 vols.; Moscow, 1928-1933), 1867-1870; Pirumova, *Zemskaia intelligentsiia*, 104-16.

<sup>7</sup> For Chuprov's and Kablukov's positions see, for example: A. I. Chuprov, "Mel'kaia promyshlennost' v sviazi s artel'nym nachalom i pozemel'noi obshchinoiu," *Rechi i stat'i* (3 vols.; Moscow, 1909) vol. I, 21-63; N. A. Kablukov, *Ob usloviakh razvitiia krest'ianskago khoziaistva v Rossii. Ocherki po ekonomii zemlevladieniia i zemledeliia*, 2nd ed. (Moscow, 1908). See also: the discussion of P. A. Vikhliaev in Hannu Immonen, *The Agrarian Program of the Russian Socialist Revolutionary Party, 1900-1914* (Helsinki, 1988); V. P. Vorontsov, *Itogi ekonomicheskogo izsledovanie Rossii (po dannym zemskoi statistiki)*. T. I. *Krest'ianskaia obshchina* (Moscow, 1892) and other works; V. S. Prugavin, *Ruskaia zemel'naia obshchina v trudakh eia mestnykh izsledovatelei* (Moscow, 1888).

<sup>8</sup> David W. Darrow, "The Politics of Numbers: Statistics and the Search For a Theory of Peasant Economy in Russia, 1861-1917 (Ph.D. diss., Univ. of Iowa, 1996), 301-19.

<sup>9</sup> A. V. Chaianov, "On the Theory of Non-Capitalist Economic Systems" and *Peasant Farm Organization* in Daniel Thorner, Basile Kerblay, & R. E. F. Smith, *A. V. Chayanov on the Theory of Peasant Economy* (Madison, 1986).

<sup>10</sup>*Sbornik statisticheskikh svedenii po Moskovskoi gubernii. T. IV. Krest'ianskoe khoziaistvo. Vypusk I. Formy krest'ianskago zemlevladieniia v Moskovskoi gubernii* (Moscow, 1879) (hereafter *Formy krest'ianskago zemlevladieniia*); Richard Wortman, *The Crisis of Russian Populism* (Cambridge, 1967), esp. chpt. 5.

<sup>11</sup> On Quetelet and the German Historical School see Porter, *The Rise of Statistical Thinking*. On German economic thought in Russia see Kingston-Mann, "In Search of the True West: Western Economic Models and Russian Rural Development," *Journal of Historical Sociology* 3, no. 1 (March 1990).

<sup>12</sup> A. A. Rusov, *Kratkii obzor razvitiia russkoi otsenochnoi statistiki* (Kiev, 1913), 5; E. Filimonov, *Kratkii istoricheskii ocherk podvorno-statisticheskikh izsledovanii v Rossii* (Viatka, 1889); N. A. Svavitskii, *Zemskie podvornnye perepisi (obzor metodologii)* (Moscow, 1961); S. N. Veletskii, *Zemskaia statistika* (2 vols.; Moscow, 1899); F. A. Shcherbina, *Krest'ianskie biudzhety* (Voronezh, 1900); A. A. Kaufman, "The History and Development of Official Russian Statistics," in John Koren, ed., *The History of Statistics: Their Development and Progress in Many Countries* (New York, 1918), 520-31; "Zemskaia statistika," *Entsiklopedicheskii slovar'*, T. XIIIa (St. Petersburg, 1894), 492-99; A. I. Gozulov, *Ocherki istorii otechestvennoi statistiki* (Moscow, 1972).

<sup>13</sup> David A. J. Macey, *Government and Peasant in Russia, 1861-1906: The Prehistory of the Stolypin Reforms* (DeKalb, 1987), 11-34; Francis W. Wcislo, *Reforming Rural Russia: State, Local Society, and National Politics, 1855-1914* (Princeton, 1990), esp. chpt. 3.

<sup>14</sup> Macey, *Government and Peasant in Russia*, 37.

<sup>15</sup> Wcislo, *Reforming Rural Russia*, esp. pp. 97-101; Roberta Thompson Manning, *The Crisis of the Old Order in Russia: Gentry and Government* (Princeton, 1982); Gary M. Hamburg, *Politics of the Russian Nobility, 1881-1905* (New Brunswick, 1984), chpt. 9; Seymour Becker, *Nobility and Privilege in Late Imperial Russia* (DeKalb, 1985), chpts. 7 & 8.

<sup>16</sup> V. I. Gurko, *Features and Figures of the Past: Government and Opinions in the Reign of Nicholas II* (Stanford, 1939), 171-172. Quoted in Wcislo, *Reforming Rural Russia*, 148.

<sup>17</sup> Stanziani, "Statisticiens...des années 1880," esp. 458-59.

<sup>18</sup> George L. Yaney, *The Urge to Mobilize: Agrarian Reform in Russia, 1861-1930* (Urbana, 1982); Theodore H. Von Laue, *Sergei Witte and the Industrialization of Russia* (New York, 1974).

<sup>19</sup> Wcislo, *Reforming Rural Russia*, chpt. 4, esp. 120-35; Kingston-Mann, "Breaking the Silence," in Kingston-Mann & Mixter, eds., 10. For a sense of Witte's agenda see his *Zapiska po krest'ianskomu delu* (St. Petersburg, 1904).

<sup>20</sup> Stanziani argues (mistakenly) that the 1893 statute was itself in line with the counter reforms. See "Statisticiens...des années 1880," 461.

<sup>21</sup> *Polnoe Sobranie Zakonov Rossiiskoi Imperii (PSZRI)*, 2nd Series, No. 40458 (St. Petersburg, 1867). The principle of local control over local taxes first appeared in 1851. See *PSZRI*, 2nd Series, No. 25398 (St. Petersburg, 1852); Veselovskii, *Istoriia zemstva*, T. I, chpt. I.

<sup>22</sup> Veselovskii, *Istoriia zemstva*, T. I, 33.

<sup>23</sup> Rossiiskii Gosudarstvennyi Istoricheskii Arkhiv (RGIA) f. 573, op. 20, d. 629, ll. 117-118; op. 19, d. 29801, ll. 22-28; f. 1290, op. 2, d. 237, ll. 17-19; Veselovskii, *Istoriia zemstva*, T. I, 10-12, 65-74, 81-83, and 656-57.

<sup>24</sup> A. Polenov, *K voprosu o podatnoi reforme. Obzor sistem zemskago pozemel'nago oblozheniia (1865-1879)* (St. Petersburg, 1880), 3.

<sup>25</sup> RGIA f. 573, op. 19, d. 29801, l. 35; op. 20, d. 629, l. 74.

<sup>26</sup> Veselovskii, *Istoriia zemstva*, T. I, 44-46 and T. IV, 414; Gosudarstvennyi Arkhiv Rossiiskoi Federatsii (GARF) f. 102, 3-e DP, op. 80 (1884), d. 588, l. 36.

<sup>27</sup> Polenov, *K voprosu o podatnoi reforme*, 11-23; Veselovskii, *Istoriia zemstva*, T. I, 49-52; RGIA f. 573, op. 20, d. 629, l. 78.

<sup>28</sup> Veselovskii, *Istoriia zemstva*, T. I, 52; Polenov, *K voprosu o podatnoi reforme*, 23.

<sup>29</sup> V. I. Orlov, *Ob organizatsii zemskikh statisticheskikh rabot v Moskovskoi gubernii* (Moscow, 1881), 6-7.

<sup>30</sup> See "Zemskaia statistika" in *Entsiklopedicheskii slovar'*, vol. XIIa, 494.

<sup>31</sup> *Protokoly zasedanii Statisticheskago Otdeleniia Moskovskago Iuridicheskago Obshchestva za ianvar'-fevral' 1887 g.* (Moscow, 1887), 3 (original emphasis).

<sup>32</sup> A. I. Vasil'chikov, *Sel'skii byt i sel'skoe khoziaistvo v Rossii* (St. Petersburg, 1881), 22.

<sup>33</sup> Using the Riazan' statistical bureau as an example was ironic. Resentful of its conclusion that they exploited former serfs and evaded taxes, conservatives temporarily disbanded the bureau and fired its chief, V. N. Grigor'ev. See *Vestnik Evropy*, no. 3 (1883), 375-76.

<sup>34</sup> RGIA f. 573, op. 19, d. 29801, l. 38.

<sup>35</sup> *Vestnik Finansov, Promyshlennosti i Torgovli*, no. 26 (June 27, 1893), 615.

<sup>36</sup> *PSZRI*, 2nd Series, No. 9744 (St. Petersburg, 1897). For the MF rules of 1894 (hereafter "Instructions") see *Sobranie zakonov i rasporiazhenii Pravitel'stva. 1894. Pervoe polugodie* (St. Petersburg, 1894), Article 687 (pp. 424-43).

<sup>37</sup> *Vestnik Finansov, Promyshlennosti i Torgovli*, no. 26 (June 27, 1893), 616.

<sup>38</sup> See, for example L. G. Zakharova, *Zemskaia kontrreform 1890 g.* (Moscow, 1968); and Thomas S. Pearson, *Russian Officialdom in Crisis Autocracy and Local Self-Government, 1861-1900* (Cambridge, 1989). On constructive aspects of zemstvo-government relations see Thomas Fallows, "The Zemstvo and the Bureaucracy, 1890-1904," in Emmons and Vucinich, eds., 177-241.

<sup>39</sup> See *Trudy podseksii statistiki IX s"ezda russkikh estestvoispytatelei i vrachei. Moskva. 3-11 ianvaria 1894 goda* (Chernigov, 1894), 1-8 (hereafter *TPS IX s"ezda*).

<sup>40</sup> *TPS IX s"ezda*, 36.

<sup>41</sup> *TPS IX s"ezda*, 31 and 32.

<sup>42</sup> *TPS IX s"ezda*, 35-37.

<sup>43</sup> *TPS IX s"ezda*, 41-42.

<sup>44</sup>*TPS IX s'' ezda*, 39-40.

<sup>45</sup>*TPS IX s'' ezda*, 36.

<sup>46</sup>*TPS IX s'' ezda*, 36-37.

<sup>47</sup>*Trudy kommissii po voprosu ob organizatsii zemsko-statisticheskikh otsenochnykh izsledovaniï (9-20 fevralia 1898 g.)* (Moscow, 1898), 11-12 (hereafter *Trudy kommissii...9-20 fevralia 1898 g.*).

<sup>48</sup>*Trudy kommissii...9-20 fevralia 1898 g.*, 13. Peshekhonov calculated income for five categories: households sowing 0 to 3, 3 to 6.6, 6.7 to 9.9, 10 to 12, and more than 12 desiatinas.

<sup>49</sup>*Trudy kommissii...9-20 fevralia 1898 g.*, 13. Peshekhonov calculated the following differences: One *desiatina* of plowland yielded an income of 5.74 rubles in smaller households, but only 2.71 for larger ones; one *desiatina* of garden land yielded 24 rubles for smaller economies, but only 19 for larger ones. For all arable lands the difference was 6.6 rubles to 3 rubles. Only forest and hayfields yielded no difference in income.

<sup>50</sup> As Chuprov noted in 1894, financial, political, and time constraints already necessitated sampling. See *TPS IX s'' ezda*, 52-62. Peshekhonov's sample constituted about seven percent of the district's households. He collected budget data from every tenth household in the sample.

<sup>51</sup>*Trudy kommissii...9-20 fevralia 1898 g.*, 14.

<sup>52</sup>*Trudy kommissii...9-20 fevralia 1898 g.*, 14.

<sup>53</sup>*Trudy kommissii po voprosam zemskoi statistiki. (Zasedaniia s 15 po 22 fevralia 1900 g.)* (St. Petersburg, 1901), 46.

<sup>54</sup>*Trudy kommissii...9-20 fevralia 1898 g.*, 15-16. On the Organization and Production School see Kerblay, "A. V. Chaianov: Life Career, Works," in Thorner, Kerblay and Smith, eds., *A. V. Chayanov on the Theory of Peasant Economy*, xxv-lxxv; N. Makarov, *Krest'ianskoe khoziaistvo i ego evoliutsiia*, vol. 1 (Moscow, 1920); Teodor Shanin, *The Awkward Class. Political Sociology of Peasantry in a Developing Society: Russia 1910-1925* (Oxford, 1972); Susan

Gross Solomon, *The Soviet Agrarian Debate: A Controversy in Social Science, 1923-1929* (Boulder, 1977).

<sup>55</sup>*Trudy kommissii...9-20 fevralia 1898 g.*, 17.

<sup>56</sup> Veselovskii, *Istoriia zemstva*, T. 3, 302; RGIA f. 1290, op. 2, d. 290. The MVD argued that the census would suffer if respondents had to supply information more than once.

<sup>57</sup> RGIA f. 1290, op. 2, d. 460, ll. 32, 34.

<sup>58</sup> RGIA f. 1290, op. 2, d. 460, ll. 4-5, 9, 17-18.

<sup>59</sup> RGIA f. 573, op. 20, d. 2043, ll. 20-22. The state's system of statistical collection, based on International Statistical Congress models, was intended to provide average figures by region. Such aggregate figures were believed to be sufficient for the needs of policy formation. See *Iubileinyi sbornik Tsentral'nago Statisticheskago Komiteta Ministerstva Vnutrennikh Del, 1863-1913* (St. Petersburg, 1913), esp. Part I; Kaufman, "The History...of Official Russian Statistics," in Koren, ed., *The History of Statistics*, 467-534.

<sup>60</sup> See RGIA f. 1290, op. 2, d. 189, ll. 5, 346-347; d. 534 ll. 1-11; Kaufman, "The History...of Official Russian Statistics," in Koren, ed., *The History of Statistics*, 492-96.

<sup>61</sup> V. D. Alenitsin, "Opyt rascheta stoimosti pshenitsy, rzhi, ovsa i iachmenia v proizvodstve i v otnoshenii pol'zovaniia sborom," *Vremennik Tsentral'nago Statisticheskago Komiteta Ministerstva Vnutrennikh Del* (hereafter *VTsSK*), no. 12 (St. Petersburg, 1889), XV.

<sup>62</sup> Alenitsin, "Materialy po voprosu o stoimosti obrabotki zemli v evropeiskoi Rossii," *VTsSK*, no. 10 (St. Petersburg, 1889), 2-3 (original italics).

<sup>63</sup> RGIA f. 573, op. 20, d. 2038, ll. 3, 12-14; *PSZRI*, 3rd Series, No. 16364 (St. Petersburg, 1902).

<sup>64</sup> RGIA f. 573, op. 20, d. 2046, ll. 1-3.

<sup>65</sup> RGIA f. 573, op. 20, d. 2046, l. 5.

<sup>66</sup> RGIA f. 1290, op. 2, d. 414, ll. 17-18, 20-21.

<sup>67</sup> RGIA f. 573, op. 20, d. 2046, l. 9.

<sup>68</sup> RGIA f. 573, op. 20, d. 2046, ll. 7-9.

<sup>69</sup> RGIA f. 573, op. 20, d. 2046, ll. 9-10

<sup>70</sup> Pleve banned contact between statisticians and peasants in twelve provinces. See Johnson, "Liberal Professionals and Professional Liberals," in Emmons and Vucinich, 355-56.

<sup>71</sup> RGIA f. 573, op. 20, d. 2043, ll. 20-22, 28-31.

<sup>72</sup> RGIA f. 1290, op. 2, d. 607, ll. 16-19, 22. Only Moscow, Nizhegorod and Saratov provinces had finished collecting data; only Nizhegorod had finished processing this information.

<sup>73</sup> RGIA f. 1290, op. 2, d. 607, l. 22-23.

<sup>74</sup> RGIA f. 573, op. 20, d. 2043, ll. 111-136;

<sup>75</sup> For the 1905 "Instructions" see *Sobranie uzakonenii i rasporiashchenii Pravitel'stva, izdavaemoe pri Pravitel'stvuiushchem Senate*, No. 180 (6 October 1905), No. 1631.

<sup>76</sup> See, for example, *Zhurnaly zasedanii Khersonskoi gubernskoi otsenochnoi kommissii*, meetings of 6 November 1901, 11 September 1902, 16 October 1903, 27 April 1904, and 29 March 1905 (Kherson, 1902-1906); *Zhurnaly Voronezhskoi gubernskoi otsenochnoi kommissii c 27-11-94 po 2-6-04 g.*, meetings of 18 December 1900 and 9 June 1901 (Voronezh, 1904).

<sup>77</sup> S. M. Dubrovskii, *Sel'skoe khoziaistvo i krest'ianstvo Rossii v period imperializma* (Moscow, 1975), 325-27. See also E. Zviagintsev, "Iz praktiki novago podatnogo zakona," *Russkoe bogatstvo*, no. 12, ch. 2 (1904), 109.

<sup>78</sup> Veselovskii, *Istoriia zemstva*, T. III (St. Petersburg, 1909), chpts. 2-3. Zemstvo taxes in Kursk district ran to 41 kopeks per *desiatina*--14% of total payments and 48% of obligations excluding redemption payments. See Zviagintsev, "Iz praktiki novago podatnogo zakona," 108.

<sup>79</sup> For a sense of how many zemstvos still conducted household inventories on some level in spite of the MVD see the 1903/04 reports to the MF in RGIA f. 573, op. 20, d. 2054. On the need for budget studies to determine production costs see esp. ll. 61, 116-118, 184; and *Zhurnaly zasedanii Kostromskoi gubernskoi otsenochnoi kommissii*, Vyp. V (Kostroma, 1908), 9-10.

<sup>80</sup> G. Baskin, "Osnovnye voprosy statisticheskoi metodologii v zemel'noi otsenke," *Statisticheskii Vestnik*, nos. 1-2 (1914), 70-110.

<sup>81</sup> RGIA f. 573, op. 20, d. 2043, ll. 278-80. The MVD was not totally resigned to this, and soon created its own school for statisticians. See *Iubileinyi sbornik Tsentral'nago Statisticheskago Komiteta*, 22-27.

<sup>82</sup> A. V. Peshekhonov, "Krizis v zemskoi statistiki," *Russkoe bogatstvo*, no. 12 (1901); Johnson, "Liberal Professionals and Professional Liberals," in Emmons and Vucinich, eds., 349-50; and discussions in *Trudy kommissii...9-20 fevralia 1898 g.*

<sup>83</sup> For example, the Special Conference on the Needs of Agriculture (first convened in 1902). See Macey, *Government and Peasant in Russia*, 62-68; A. A. Rittikh, *Zavisimost' krest'ian ot obshchiny i mira* (St. Petersburg, 1903).