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Coercion, vertical trust and entrepreneurism in bureaucracies: evidence from the Nazi Holocaust

Franklin G. Mixon Jr.
Department of Economics, Auburn University

Ernest W. King
Department of Legal Studies, University of Southern Mississippi

Abstract

Breton and Wintrobe (1982) develop a non-traditional (modern) model of bureaucratic management that is based on the notion of "vertical trust" – the notion that subordinates "trade services" that advance the goals of the bureau"s leadership in return for various "informal payments," none of which are codified in formal contracts between the two sets of parties. Applying the model to the Nazi bureaucracy explains how Nazi functionaries, such as Adolf Eichmann, acted as bureaucratic entrepreneurs in accomplishing goals relating to "the Jewish question," and ultimately "the Final Solution," for their superiors, such as Adolf Hitler and Heinrich Himmler (Breton and Wintrobe, 1986). As an extension of prior research, the current study examines the hypothesis that the use these vertical trust relationships within the borders of their minor Axis partners (e.g., Hungary) worked more effectively for the Germans than coercion, which would have been required to a greater degree within the borders of occupied European countries (e.g., Holland). Specifically, our estimates suggest that, ceteris paribus, owing to their use of vertical trust networks the minor Axis countries each contributed about 152,000 more European Jews to the Nazi Holocaust apparatus than their German-occupied European country counterparts, wherein the Nazis relied more heavily on coercion.

1. Introduction and Background

There is little argument with characterizing the German Nazi governmental apparatus' effort, during the midst of prosecuting a two-front war, to systematically murder six million people in a few years time (i.e., mainly between 1941-1945) with the term "terrible efficiency." According to Breton and Wintrobe (1986: 924), it was the thousands of "Adolf Eichmanns," with their fierce loyalty to Adolf Hitler and his Nazi regime that produced the results seen from the Nazi bureaucracy of murder. However, there had to be more that motivated all of these Eichmanns to act with such zeal, especially given the repugnance of their aims, than simply a loyalty to Hitler. That *x*-factor was, according to Breton and Wintrobe (1986: 924), the competitive and entrepreneurial spirit that characterized these "Eichmanns" that was required to produce results like those seen between 1941 and May of 1945. In their 1982 book on bureaucratic conduct, Breton and Wintrobe develop a non-traditional (modern) model of bureaucratic management that is based on the notion of "vertical trust" – the idea that subordinates "trade services" that advance the goals of the bureau's leadership in return for various "informal payments," none of which are codified in formal contracts (given, in the case of the Nazi bureaucracy of murder, the repugnance of the "informal services") between the two sets of parties. Applying the Breton and Wintrobe (1982) model to the Nazi bureaucracy, this meant that Nazi functionaries such as Eichmann acted as bureaucratic entrepreneurs in accomplishing goals relating to "the Jewish question," and ultimately "the Final Solution," for their superiors, such as Hitler and Heinrich Himmler (Breton and Wintrobe, 1986).

Although Breton and Wintrobe (1986) focus mainly on Adolf Eichmann's historical role in providing Hitler with informal services related to the Final Solution, Mixon, Sawyer and Trevino (2004a and 2004b) provide a broader accounting of the activities of other historical figures, often paired with evidence of "informal payments" within the Nazi's vertical trust network, that support a wide application of the Breton and Wintrobe (1982 and 1986) model of bureaucracy. In addition to Eichmann, these include Reinhard Heydrich, who headed the Reich Security Service (i.e., the SD) at a rank (*Sturmbannführer*) only two levels above the median position in the Nazi hierarchy, and Christian Wirth, who administered the construction branch of "Operation Reinhard," the plan to use death camps at Belzec, Sobibor and Treblinka to eradicate the Polish Jews (Mixon et al., 2004: 860-861). Wirth was, at the time (1941), at a rank (*Haupsturmführer*) only one level above the median position in the Nazi apparatus. According to Mixon et al. (2004), the potential for advancement for each of these two functionaries served as a potential "informal payment" that was significant enough to motivate each of them to devise creative initiatives and solutions related to "the Jewish question." That motivation, and the resulting "Schumpeterian entrepreneurship" (Breton and Wintrobe, 1986: 909) exhibited by both Heyrdich and Wirth, led to rates of advancement that are difficult to imagine in most bureaucracies.[1] For example, Heydrich advanced from a 60th percentile position (rank) in the Nazi bureaucracy to a 90th percentile position in the period from 1931-1941 (Mixon et al., 2004a: 862-863). Breton and Wintrobe's (1986) subject, Adolf Eichmann, also advanced at a rapid pace, moving from a 45th percentile position (rank) to a 65th percentile position (rank) over the brief period from 1938-1941 (Mixon et al., 2004a: 862-863).

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[1] See also Schumpeter (1934 and 1942).

There is also little argument that such an undertaking – the murder of six million people – would require the participation of thousands or more people who were spread all over the European continent. As Mixon et al. (2004a: 863) state,

"It seems reasonable to assume . . . that results concerning the final solution would have been greater in the minor axis countries . . . than in the other countries that Germany occupied [militarily] . . . This likely would have obtained given that, within the minor axis power countries, the Nazi bureaucracy would have been able to rely on local vertical trust networks, in addition to their own vertical trust networks and the coercion of the local populations/Jewish Councils (*Judenrate*). In the remaining occupied countries . . . only the latter two options for effecting the solution to the Jewish question in Europe would have been available."

Through the quote above Mixon et al. (2004a) offer a compelling economic hypothesis. However, given that this particular hypothesis formed only a minor part of their study, the empirical analysis of it therein is scant. The current study more adequately tests the bureaucratic institutions hypothesis above. Upon obtaining results from a linear regression, our estimates are decomposed so that a real comparison of coercion and vertical trust can be made. The decomposition technique used here is found in labor market studies that test for the presence/absence of gender and/or racial discrimination in wages and other aspects of employment.[2] In the following section, these empirical tests, along with their results, are more fully developed and presented.

2. The Nazi Bureaucracy of Murder: Coercion vs. Vertical Trust

Our statistical test of the relative scale of coercion and vertical trust in the Nazi bureaucracy of murder begins with the model in equation (1) below,

$$\text{DEATHN}_i = \alpha + \beta_1 \text{TOTJEWS}_i + \beta_2 \text{VTRUST}_i + \varepsilon, \tag{1}$$

where DEATHN_i is equal to the number of Jews killed in country i during the Nazi Holocaust, TOTJEWS_i is equal to the pre-war Jewish population in country i and VTRUST_i is a dichotomous variable equal to 1 if country i is aligned with the major European Axis powers during WWII, and zero otherwise. Also in equation (1) are α, β_1, and β_2, which are parameters to be estimated (by OLS) in the model, while ε is the error term. One would expect that the German-occupied European countries with larger pre-WWII Jewish populations experienced higher death totals at the hands of the Nazi bureaucracy, *ceteris paribus*. Thus, it is expected that β_1 will be greater than zero. If coercion was as effective as vertical trust in carrying out the Nazi holocaust, then one would expect that β_2 will be equal to zero. However, if there are gains from the kinds of bureaucratic entrepreneurship that are fostered in a bureaucratic structure that relies on vertical trust, with its attendant "informal payments," then one would expect that β_2 will be greater than zero. This is so because the leaders of the Nazi bureaucracy of murder would have been able to use vertical trust to carry out the Holocaust within the borders of partner or minor Axis countries (e.g., Rumania) for which VTRUST=1.

Data on the number of Jews killed in each country, along with the various sizes of the pre-WWII Jewish populations for each, come from *The Simon Wiesenthal Center*. These are

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[2] Blinder (1973) and Oaxaca (1973) represent the seminal articles on wages decomposition. As such, the terms "Blinder decomposition" and "Blinder-Oaxaca decomposition" are often applied to the statistical exercise.

used in conjunction with the map of pre-WWII Europe shown in the Appendix (Pearcy and Dickson, 1996) to code $VTRUST_i$ for the various European countries. By the eve of WWII (i.e., August 31, 1939), Germany had annexed Austria to its south and the part of Czechoslovakia that is today known as the Czech Republic to its southeast. As such, these areas are considered part of Germany and the major European Axis powers (i.e., Germany and Italy) for the purposes of this study. The minor Axis powers used in this study are Hungary and Rumania, both of which lie to the southeast of Germany.[3] These countries, along with the Axis-occupied countries from the Appendix, are listed in their respective categories in Table 1.[4]

Table 1
Nazi Bureaucracy of Murder: Country Classifications

Coercion Countries	Vertical Trust Countries
Belgium	Hungary
Denmark	Rumania
Estonia	
France	
Greece	
Latvia	
Lithuania	
Luxembourg	
Netherlands	
Norway	
Slovakia	
Soviet Union	
Yugoslavia	

Estimation results for equation (1) are shown below in equation (2), with t-statistics in parentheses:

$$DEATHN = 19{,}443 + 0.360[TOTJEWS] + 150{,}768[VTRUST] \qquad (2)$$
$$(1.2) \quad (19.3) \qquad\qquad (3.7)$$

$$F\text{-stat}=212.8 \qquad R^2=0.973$$

Not only are the regressors in (2) above jointly significant (i.e., F-stat=213) for explaining DEATHN, the model explains almost all of the variation (i.e., $R^2=0.97$) in DEATHN across the European countries. As expected, both β_1 and β_2 are greater than zero, and statistically so in both cases. In fact, the equation (2) results suggest that, *ceteris paribus*, the number of Jews killed in the minor Axis powers exceeded that in the occupied European countries by more

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[3] We omitted countries reporting fewer than 50 Jews killed as part of the Holocaust. This precluded the use of Bulgaria and Finland, each of which reported fewer than 10 deaths.

[4] The death camps at Auschwitz, Belzec, Chelmo, Majdanek, Sobibor and Treblinka are generally regarded as the most well-known of the Nazi death camps. Each of these was located in Poland. Because so much of the killing during the Holocaust occurred within the borders of Poland, and particularly within these camps, the lack of the need for transcontinental transportation, etc. made it easier for the Nazis to apply the Holocaust apparatus to the Polish Jews. Therefore, we omitted Poland from our empirical analysis. However, looking ahead our results are not sensitive to inclusion of Poland as a categorical variable for the importance of its death camps to the Nazi bureaucracy.

than 150,000.[5] However, the dummy variable approach offered by equation (1) above is not adequate in explaining whether or not the additional deaths from within the minor Axis powers is due to their status as minor Axis powers. Thus, the approach in equation (1) is not capable of parsing the coercion vs. vertical trust hypothesis developed in Mixon et al. (2004a), and re-stated above in the instant study.

   To adequately parse the coercion vs. vertical trust hypothesis, the results in equation (2) are decomposed. This is done by comparing the difference in the mean of DEATHN across the minor Axis countries and the occupied countries with the difference in the means of DEATHN in these two sets of countries assuming they had been classified or treated the same way (e.g., as occupied countries) by the Germans. First, the difference in the actual means, also known as the *total effect*, is equal to 295,170, in favor of the minor Axis powers. This effect is shown in Table 2. Also included in Table 2 is the *endowment effect*, which represents how DEATHN would have differed across the two sets of countries in Table 1 had both sets existed (during WWII) as occupied countries. This effect is found using the results of a regression of DEATHN on TOTJEW using only the data for the occupied countries. The mean values of TOTJEW for the occupied countries, and that for the minor AXIS powers, are separately applied to this regression in order to calculate the endowment effect. As Table 2 indicates, the endowment effect is equal to 143,380, and favors the minor Axis powers. The endowment effect indicates that DEATHN in the minor Axis powers is predicted have exceeded that in the occupied countries *even if* the minor Axis powers would have had to have been occupied by Germany in order to induce their cooperation in the Nazi Holocaust. However, as a comparison between the total effect and the endowment effect shows (see Table 2), the total effect is much larger than the endowment effect. The difference between the two, almost 152,000, is known as the *residual effect* or *residual difference*, and it represents that portion of the total effect that can be attributed to the minor Axis powers' status as minor Axis powers. That is, the residual effect, with its *positive sign*, represents the gains in scale that can be attributed to the Nazis' use of vertical trust, as opposed to coercion, in carrying out the respective portions of the Holocaust in the minor Axis countries.

Table 2
Decomposition Measures

Total Effect	Endowment Effect	Residual Effect
295,170	143,380	151,790
		$[F_{2,11} = 25.65]$

   To complete our statistical analysis, we treat the residual effect above as stochastic. To conduct a test of significance on this component of the total effect, DEATHN is regressed on TOTJEW, VTRUST and [TOTJEW • VTRUST] using the pooled data set, where the interaction term (i.e., [TOTJEW • VTRUST]) represents the difference in the country-classification estimates of the regressor TOTJEW. The significance test used here is the traditional *F*-test for the significance of the last *M* coefficients in the model (i.e., [TOTJEW • VTRUST]) and VTRUST, the vertical trust/coercion dummy (Jackson and Lindley, 1989). The resulting *F*-statistic is equal to 25.65 (with 2,11 degrees of freedom), which is highly significant. This result indicates that the residual effect, which itself represents more than 51

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[5] A version of equation (1) that also includes JEWOFPOP, or the Jewish percentage of each country's 1939 overall population (excluding Slovakia) was also tested. In that case, all three regressors are positive and statistically significant, and they account for 99 percent of the variation in DEATHN.

percent of the total effect in death counts across the two sets of European countries in Table 1 (in favor of the minor Axis powers), is an important factor in explaining differences in the scale of the Nazi Holocaust apparatus across the European continent.

3. Concluding Comments

Given what the Nazis accomplished through the Final Solution – a result that would not have been predicted by the traditional model of bureaucracy – it is important that scholars continue to focus on refining that model, as Breton and Wintrobe (1982 and 1986) and Mixon et al. (2004a) have done. As the first study to focus on the issue through extensive empirical testing, this study has further, and uniquely, shown how widely applicable the Breton-Wintrobe (modern) model of bureaucracy is in explaining the horrific and criminal acts committed by the Nazis during the Holocaust. Our statistical results above indicate that, through the use of vertical trust networks, and with their attendant informal payments, a spirit of bureaucratic or Schumpeterian entrepreneurship was harnessed within the Nazi Holocaust bureaucracy functionaries in places like Hungary and Rumania that was similar to that seen in well-known historical figures from Germany, such as Adolf Eichmann. Through its vast size and scope, the Nazi Holocaust apparatus is unlike any other bureaucracy in history. It is because of this uniqueness that the Breton-Wintrobe (modern) model of bureaucracy is likely to be adaptable in ways that aid in our understanding of the more quintessential bureaucracy.

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Appendix
Europe on the Eve of World War II, 1939

Source: Pearcy and Dickson (1996).