Police Legitimacy, Procedural Justice, and Cooperation with the Police: A Polish Perspective

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Purpose:

The paper presents the key findings of the research conducted in Poland in 2013 within the framework of the international project titled "*Legitimacy Policing and Criminal Justice in Central and Eastern Europe*". The main purpose of the study was to investigate whether and to what extent the process-based models of policing research hypotheses were supported in the Polish context. More specifically, the research examined influences of the main factors that shape the perception of police legitimacy and the impact of police legitimacy on public cooperation with the police.

Design/Methods/Approach:

The study uses data from a web-survey conducted among 506 students of law, security, and administration from 11 higher-education institutions in Poland. A series of correlation coefficients and regression models were used in order to examine the relations between all variables and test the research hypothesis derived from the process-based model of policing.

Findings:

The analyses showed that procedural fairness of the police has the largest impact on police legitimacy. Furthermore, the attitude towards procedural justice has the strongest influence on the students' trust in the police. Less equivocal are the connections between police legitimacy and cooperation with the police. Regression models proved only the influences of police effectiveness and an obligation to obey the law on the willingness to cooperate with the police.

Practical Implications:

The results of the study can offer recommendations for the Polish police, which may be a starting point for promoting fair and just practices, as well as for improving cooperation with the police and other law-related behaviour.

Originality/Value:

The current study extends prior research in two ways. First, the presented research significantly contributes to a growing body of literature that tests the process-based model of a policing hypothesis in research settings outside the United States of America. Second, this study may lead to the redefining of the concept of (police) legitimacy.

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Legitimnost policije, postopkovna pravičnost in sodelovanje s policijo: poljska perspektiva

Namen prispevka:

Prispevek predstavlja ključne ugotovitve raziskave, opravljene na Poljskem v letu 2013 v okviru mednarodnega projekta z naslovom "*Legitimnost policijske dejavnosti in kazenskega pravosodja v srednji in vzhodni Evropi*". Glavni namen raziskave je bil ugotoviti, ali in v kolikšni meri so bile raziskovalne hipoteze o na procesu temelječem modelu policijske dejavnosti potrjene v poljskem kontekstu. Natančneje, raziskava je preučila vplive glavnih dejavnikov, ki oblikujejo dojemanje legitimnosti policije, in vpliv legitimnosti policije na sodelovanje javnosti s policijo.

Metode:

Študija uporablja podatke iz spletne ankete, izvedene med 506 študenti prava, varnostnih in administrativnih ved z 11 visokošolskih zavodov na Poljskem. Avtorji so uporabili niz koeficientov korelacije in regresijskih modelov, da bi preučili odnose med vsemi spremenljivkami in preverili raziskovalno hipotezo, ki izhaja iz modela na procesu temelječe policijske dejavnosti.

Ugotovitve:

Analize so pokazale, da ima postopkovna pravičnost policije največji vpliv na legitimnost policije. Poleg tega ima odnos do postopkovne pravičnosti najmočnejši vpliv na zaupanje študentov v policijo. Manj dvoumne so povezave med legitimnostjo policije in sodelovanjem s policijo. Regresijski modeli so pokazali le vpliv učinkovitosti policije in obveznosti spoštovati zakone na pripravljenost sodelovati s policijo.

Praktična uporabnost:

Rezultati študije lahko ponudijo priporočila poljski policiji, ki so lahko izhodišče za spodbujanje poštene in pravične prakse ter za izboljšanje sodelovanja s policijo in drugega s pravnimi normami povezanega vedenja.

Izvirnost/pomembnost prispevka:

Sedanja študija podaljšuje predhodne raziskave na dva načina. Prvič, predstavljena raziskava pomembno prispeva k obsegu literature, ki testira hipoteze o na procesu temelječem modelu policijske dejavnosti v raziskovalnih okoljih zunaj Združenih držav Amerike. Drugič, ta študija lahko vodi do redefiniranja pojma legitimnosti policije.

1 INTRODUCTION

Issues related to the topic of police legitimacy and procedural justice have been the object of increasing interest in criminological research around the world for many years. Previous studies have shown that perceived police legitimacy plays a major role in the perception of law, acceptance of police decisions, and cooperation with the police in crime prevention. Studies have also shown that the perceived police legitimacy is significantly determined by the level of the abidance of procedural justice rules by the police during the application of the law (Sunshine & Tyler, 2003).

In this paper, the first empirical test of T. R. Tyler's process-based model in Poland is presented. The main purpose of this study was to verify whether and to what extent the process-based model research hypotheses are supported in the Polish context. The current study assesses two main hypotheses about (1) the influence of procedural justice on police legitimacy, and (2) the influence of the perceived police legitimacy on a willingness to cooperate with the police. To test these hypotheses a number of regression models were conducted using web-survey data from a university sample of 506 Polish students.

2 POLISH BACKGROUND

A review of Polish literature indicates that legitimacy has been a subject of interest to many academic fields. Among them, we can distinguish many theories of legitimacy which, in the simplest terms, can be divided into legalistic, normative and behavioural theories. However, none of them were applied to the legitimization of the police. It is even more surprising that the scope of Polish definitions of "legitimacy" is very broad. It covers not only the issues of authorities and the law, but also the problems of the political system and the entire social order (Świątkiewicz, 1993). This is partially related to a range of political, social, and cultural changes that the Polish society has been going through in recent years due to the system transformation which took place in Poland in the 1990s. They caused, *inter alia*, a need to focus on the deficiencies of legitimacy and the factors enabling the process of legitimation. Thereby, the issue of "quality" of legitimation remained on the margins of theoretical considerations. Another important feature specific to the Polish approach to legitimacy is the variety of definitions, with regard to the object of legitimation. In the case of the legitimacy of law, which is related to police legitimacy, attention is focused primarily on its justification, mainly by a reference to socially important systems of values (Skąpska & Stelmach, 1988–1989). At the same time, with regard to legitimation of specific public institutions, the importance of trust as a basis for assessing these institutions is crucial (Rychard, 2010). Finally, in the context of the relationship between legitimation and procedural justice considered in this article, it is worth mentioning that procedural justice is very rarely described or discussed by Polish authors. The exceptions are the works by Borucka-Arctowa (1997, 1998) from the late 1990s on the role of procedural fairness in the application of law.

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In Poland, a theoretical concept of police legitimacy has not yet been empirically verified, and the attitude of Poles towards the police may be assessed only based on the public opinion polls conducted by the Public Opinion Research Center. In a study that runs every six months, a representative sample of adult residents in Poland is asked about their views on trust in public institutions, and, according to its findings, the Polish police obtain relatively high ratings. For instance, in the study from September 2013, the police received 66% positive and 23% negative grades. In comparison, in the same study, the Sejm (the lower house of parliament) received 20% positive and 65% negative grades, while the Catholic Church 56% good and 32% bad opinions (Public Opinion Research Center, 2013). In the latest study, conducted in March 2014, 67% of Poles evaluated the activities of the police positively. Only the media and the country's president received better results than the police (Public Opinion Research Center, 2014).

3 THE PROCESS-BASED MODEL

The main concept of the process-based model of policing is police legitimacy. Undoubtedly, any discussion of legitimacy cannot start without a reference to M. Weber, who distinguished three forms of legitimate power (traditional, legal rational, charismatic) and asserted that, in the modern state, legality is the dominant ground for claims to legitimacy (Weber, 1978). Weber's works became subject to criticism. For example, Beetham (1991) argued that Weber (1978) placed an unnecessary emphasis on people's subjective beliefs. According to Beetham (1991), legitimacy should focus on the objective compatibility between legal validity of power and the manner in which that power is exercised, as well as the shared values of society. Despite criticism, the process-based model refers to citizens' subjective beliefs, it assumes that law-related behaviour and cooperation with legal authorities are mainly shaped by the perception that the legal authorities are legitimate, and a variation of perceived legitimacy is explained by fairness judgments in the process through which legal officials exercise their authority (Tyler, 1990, 2003). The level of the authorities' legitimacy is higher in the eyes of a public opinion when the latter believes that the authorities are respectful, polite, and make fair decisions when dealing with community residents (Reisig, Bratton, & Gertz, 2007).

Many studies in the USA have examined procedural justice, police legitimacy, and cooperation with the police, using the process-based model of policing. Sunshine and Tyler (2003) carried out a study in New York City in two time periods: before and after September 11th, 2001, and they observed that the residents' perceptions of police legitimacy were mostly based on procedural justice judgments, less on police activity in maintaining law and order. During both periods, procedural justice was the main indicator of police legitimacy. In the study conducted by Reisig et al. (2007), procedural justice and distributive justice correlated the strongest with police legitimacy. The authors also reported that the trust in the police predicted cooperation with the police, but an obligation to obey the police played an insignificant role. Only a few researchers have tested the process-based model of policing outside the USA. The first one was

the study Hinds and Murphy (2007) conducted among adult Australian residents. The authors observed that procedural justice had the greatest influence on police legitimacy and smaller on police effectiveness. The research of Reisig and Lloyd (2009) carried out among Jamaican school children has shown that procedural justice influenced the willingness to cooperate with the police, whereas Tankebe's (2009) study conducted in Ghana found that legitimacy did not explain cooperation with the police. Procedural justice, police legitimacy, and cooperation with the police were also studied by Reisig, Tankebe, and Meško (2012) among students in Slovenia. The authors reported that trust in the police is a significant factor influencing students' willingness to cooperate with the police. They found a strong correlation between police legitimacy and willingness to cooperate with the police as well as that police legitimacy did not change across various forms of cooperation.

4 METHODS

4.1 Data and Sample

The study uses data from a web-survey administered to a sample of law, administration and security students attending 11 higher-education institutions in Poland.[1] To generate the sample, letters were sent to many university officials explaining the study and requesting permission to survey the students. The universities having accepted the invitation sent their students' e-mails containing an explanation of the study and a link to the web-survey. The survey was administered between April and May 2013.[2] The sample consisted of 506 students, including female (322) and male (184) respondents aged 19 to 30.[3] The students studied: law (75%), administration (10%), and security (17%) and were mostly in the first (40%) and the second (22%) year of study. The students' victimization experiences show that 42% (163) respondents, who reported that they were a victim of crime, were victimized by theft (55%), street robbery (21%), fraud (17%), burglary (17%), assault (10%), sexual assault (4%) and such other minor crimes (12%) as stalking, bullying and slandering. Most of them experienced victimization once (74%), but there were also those who experienced it twice (17%) or even three or four times (9%). Among the students who reported victimization, 7% indicated that this experience did not have any effect on them, 11% students reported that they handled their victimization well, 13% felt that their victimization was bad but they are not suffering any more, and 4% were still suffering the consequences. The students had experiences with police and the criminal justice system mostly as a person who committed a minor crime (35%), as a victim (26%), an eyewitness

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1   *See Appendix A for detailed characteristics of the sample.*

2   *The Polish research was conducted at the Department of the Sociology of Law of the Faculty of Law and Administration of the Jagiellonian University by Professor Janina Czapska, Ewa Radomska M.A., and Daria Wójcik, M.A.*

3   *The survey completed 804 students, but the analysis does not include 298 questionnaires in which vast majority of questions were not answered and which were filled out by respondents over 30 years of age.*

(21%) or a hearsay witness (21%), and a person who reported a crime (18%), rarely as a person suspected of committing a crime (3%). The perception of police and criminal justice professionalism of 295 students who have had experiences with the police and criminal justice system can be divided into to three groups: professional (69%), unprofessional (29%), and extremely unprofessional (2%).

4.2 Measures

Police legitimacy has been conceptualized as a two-dimensional concept (Tyler, 2003; Sunshine & Tyler, 2003):[4] trust in the police and an obligation to obey the police, and this contention is supported by empirical research (Reisig et al., 2007). The first dimension, *trust in the police*, was constructed using two survey items: "The police in my community are trustworthy" and "I am proud of the police in my community". The second dimension, *obligation to obey the police*, was also represented by two survey items: "You should do what the police tell you to do even if you disagree" and "You should accept police decisions even if you think they are wrong". The alpha coefficient for the police legitimacy scale was 0.672 and the scale was coded so that higher scores reflected a higher level of the perceived police legitimacy ($M = 13.70$, $SD = 2.771$). The factor analyses did not confirm that trust in the police is a distinct empirical variable; its items loaded the strongest on police effectiveness and procedural justice.

Procedural justice. Prior research has conceptualized procedural justice as a four-dimensional concept (Tyler, 2008). The first one, *neutrality of the police*, was constructed using four survey items: "The police enforce the law consistently when dealing with all people", "The police provide the same quality of service to all citizens", "The police provide better services to wealthier citizens" (reverse scored), and "The police give minorities less help because of their race" (reverse scored). The second dimension, *preservation of citizens' dignity by the police*, was constructed using three items: "The police treat everyone with dignity", "The police are courteous to citizens they come into contact with", and "The police respect the citizens' rights". The third dimension, *trustworthy motives of the police activities*, was constructed using four survey items: "The police make decisions to handle problems fairly", "The police can be trusted to make decisions that are right for your community", "The police follow through on their decisions and promises they make", and "The police make decisions based on the facts". *Listening to the public*, the fourth dimension, was constructed using three items: "The police don't often listen to all the citizens involved before deciding what to do" (reverse scored), "The police explain their decisions to the people they deal with", and "The police take time to listen to people". The level of internal consistency for procedural justice was very high (Cronbach's $\alpha = 0.902$, $r = 0.404$). The scale was coded so that higher scores reflected more positive procedural justice judgments ($M = 33.78$, $SD = 6.644$).

Cooperation with the police. Five survey items were used to construct the cooperation with the police scale. The items referred to participants' willingness

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4   *See Appendix B for a complete list of all survey items and corresponding summary statistics used in analyses.*

to cooperate with the police in the various situations, including instances of: minor theft ("Imagine that you were out and saw someone steal a wallet. How likely would you be to call the police?" and "If the police were looking for witnesses in a case where someone's wallet was stolen, how likely would you be to volunteer information if you witnessed the theft?"), government corruption ("Imagine you had evidence that someone bribed a government official. How likely would you be to report this behaviour to the police?"), a house or car being broken into ("How likely would you be to call the police if you saw someone break into a house or a car?" and "How likely would you be to volunteer to serve as a witness in a criminal court case involving a crime that you witnessed?"). The alpha coefficient of the scale cooperation with the police was 0.777 ($r = 0.422$). The scale was coded so that higher scores reflected a greater willingness to cooperate with legal authorities ($M = 15.92$, $SD = 2.955$).

Police effectiveness. Four survey items, focusing on the participants' judgments of how well the police deal with crime and disorder, were used to construct the police effectiveness scale: "The police do a good job preventing crime in my neighbourhood", "The police do a good job maintaining order in my neighbourhood", "The police respond promptly to calls about crime", "The police do a good job controlling violent crime". The alpha coefficient for this summate scale was 0.795 ($r = 0.496$). The police effectiveness scale was coded so that higher scores reflected more positive judgments regarding police effectiveness in dealing with crime and disorder ($M = 9.50$, $SD = 2.279$).

Obligation to obey the law. The three items-scale of obligation to obey the law was adopted from Sampson and Bartusch (1998): "It is okay to do anything you want as long as you don't hurt anyone", "To make money, there are no right or wrong ways anymore, only easy ways and hard ways", "Laws were made to be broken". The alpha coefficient for this summate scale was 0.720 ($r = 0.478$). The scale was coded so that higher scores reflected higher levels of obligation to obey the law ($M = 9.56$, $SD = 1.671$).

Demographic variables. Two demographic variables were used in the analyses. *Age* was coded using categories ranging from 1 (19 *years*) to 12 (30 *years*). *Male* was a dichotomous measure (1 = yes). Both variables were included because the international literature and prior research show a gender gap in criminal offending (Heimer, 2000) and a relationship between age and criminal activity (Gottfredson & Hirschi, 1990).

Variables	*n*	*M*	*SD*	*Min*	*Max*	*α*	*r*
Police legitimacy	494	13.70	2.771	7	22	0.672	0.254
Procedural justice	489	33.78	6.644	15	56	0.902	0.404
Cooperation with the police	504	15.92	2.955	5	20	0.777	0.422
Police effectiveness	492	9.50	2.279	4	16	0.795	0.496
Obligation to obey the law	496	9.56	1.671	1	3	0.720	0.478
Male	506	0.36	0.482	0	1	---	---
Age	506	4.24	2.147	1	12	---	---

Table 1: Summary statistics for variables used in the analyses

4.3 Analytical Strategy

With the purpose of separating the analyses connected with two most important nexuses, (1) the nexus between procedural justice and police legitimacy and (2) the nexus between police legitimacy and cooperation with the police, two empirical models were created. The first model was made up of four variables (trust in the police, obligation to obey the police, police effectiveness and procedural justice) and was used to estimate the influence of the theoretically founded dependent variables on police legitimacy. Within the second model composed of five variables (cooperation with the police, trust in the police, obligation to obey the police, police effectiveness and obligation to obey the law), the scale of cooperation with the police was regressed onto factors which, according to prior research, influence this theoretical and empirical construction.

The analyses proceeded in three stages. In the first stage, a factor analysis was used in order to construct complex variables (scales) based on theoretical considerations and prior research (Table 1). In the second stage, a series of Pearson's correlation coefficients were generated in order to examine the relations between all variables used in the analyses (Table 2). In the third part, regression models were created to enable testing of the hypothesis derived from the processed-based model of policing (Tables 3, 4, 5, 6, 7). Since every dependent variable included in this study can be treated as interval scale measures, the Pearson's correlation coefficients and ordinary least-squares (OLS) regression were used.

5 RESULTS

An evaluation of the Pearson's correlation coefficients allowed to create an initial empirical verification of the assumed hypothesis. Regarding the first part of the process-based model of policing adopted in this study, the results from the Pearson's coefficients exhibit that perceptions of procedural justice co-vary with police legitimacy judgments in the hypothesized direction ($r = 0.561$). What is more, this correlation was stronger in the case of trust in the police ($r = 0.756$) than in the case of obligation to obey the police ($r = 0.242$). The assumed connection between police effectiveness and police legitimacy was confirmed ($r = 0.474$). In this case, trust in the police is also confirmed as the legitimacy component which correlates the strongest ($r = 0.652$). The relations between the views on the police legitimacy and declared willingness to cooperate with the police were much less clear. Although bivariate correlations show that the police legitimacy and the cooperation with the police scales were empirically linked, the magnitude of the coefficient was relatively weak ($r = 0.173$). Moreover, the variables which indicate a stronger correlation with the public cooperation than police legitimacy are police effectiveness ($r = 0.240$) and obligation to obey the law ($r = 0.186$). Nevertheless, these observations support the second main hypothesis derived from the process-based model. Mentioned dependencies were statistically significant at the 0.01 level.

Variables	1.	2.	3.	4.	5.	6.	7.
1. Police legitimacy	1.00						
2. Trust in police	---	1.00					
3. Obligation to obey the police	---	0.25**	1.00				
4. Procedural justice	0.56**	0.75**	0.24**	1.00			
5. Cooperation with the police	0.17**	0.20**	0.10*	0.27**	1.00		
6. Police effectiveness	0.47**	0.65**	0.19**	0.66**	0.24**	1.00	
7. Obligation to obey the law	0.17**	0.09*	0.17**	0.08	0.18**	0.04	1.00

Table 2: Pearson's correlation coefficients

*$p < 0.05$ (two-tailed test), **$p < 0.01$ (two-tailed test)*

Besides testing the assumptions made by the researchers, the correlation coefficients matrix provides a brief look at the relations between the independent variables. Firstly, it should be noted that the value of one of these coefficients was very high and close to the conventional threshold for detecting harmful levels of collinearity (0.70). Secondly, regarding the strength of the correlation between the procedural justice and the police effectiveness ($r = 0.668$) it should be emphasized that these two variables happen to be empirically more similar than it was assumed, and what is more, both of them were found to be strongly correlated with trust in the police. The last observation will be brought up and interpreted later (see Discussion).

The first regression model (Table 3) indicated that the perceived procedural justice was the strongest determinant of police legitimacy. In addition, there was quite clear evidence that police effectiveness as well as an obligation to obey the law also influenced the police legitimacy declared by the surveyed. According to the coefficient of multiple determination (R^2), this five-variable model (age and gender were also included) explains only 37% of the variation associated with the police legitimacy; however, the joint association test (F-test) showed that it offered more explanatory power than would be expected by chance. Also, the test statistic (t-ratio) for partial regression coefficients was statistically significant at the 0.01 level for four out of the five variables taken into account. Similar findings were revealed by separate analyses for each variable from which the procedural justice scale turned out to be the one accounted for the largest portion (32%) of the explained variation. Inclusion of the police effectiveness and obligation to obey the law in the police legitimacy model attenuated very slightly the effect of procedural justice (about 1% and 2% reduction). It proved that police legitimacy was influenced the most by fair and interpersonal treatment by the police which is consistent with one of the process-based model tenets.

Variables	B	SE	Beta	t-ratio	VIF
Police effectiveness	0.186	0.061	0.152	3.042*	1.842
Procedural justice	0.197	0.021	0.469	9.381*	1.851
Police legitimacy	---	---	---	---	---
Obligation to obey the law	0.228	0.062	0.136	3.686*	1.015
Age	0.072	0.048	0.056	1.510	1.015
Male	0.562	0.215	0.097	2.615*	1.011
Constant	2.590	0.812	---	3.191	---
F-test	54.929*				
R^2	0.370				

Table 3: Police legitimacy OLS regression model

*$p < 0.01$

Table 4: Cooperation with the police OLS regression model 1	Variables	B	SE	Beta	t-ratio	VIF
	Police effectiveness	0.297	0.064	0.232	4.626*	1.316
	Procedural justice	---	---	---	---	---
	Police legitimacy	0.045	0.053	0.043	0.847	1.347
	Obligation to obey the law	0.289	0.078	0.164	3.690*	1.042
	Age	0.103	0.060	0.076	1.732	1.018
	Male	-0.080	0.269	-0.013	-0.297	1.014
	Constant	9.294	0.990	---	9.392	---
	F-test	10.635*				
	R^2	0.101				

$p < 0.01$

Much more surprising were the results from the second regression model (Table 4), whose aim was to examine how particular variables influence the declared willingness to cooperate with the police. Based on the OLS equation for public cooperation with the police, it could be concluded that only police effectiveness and an obligation to obey the law had a statistically significant influence on the cooperation with the police. However, this model explained a very modest amount of variation (10%) associated with the dependent variable. What is more, separate analyses reveal that two of the mentioned independent variables account only for a small amount (20% and 6%) of the explained variation. Nevertheless, the F-test indicated that the five-variable model was superior as compared to the constant-only model. To sum up, the results did not support the process-based model hypothesis whereby police legitimacy and public cooperation co-vary in the same direction. Thus, the analyses should be continued with an emphasis on why the effect of police legitimacy on cooperating with the police was not empirically verified in the Polish study. Such consideration can shed light on the different legitimacy operationalization (see Discussion).

Table 5: Trust in the police OLS regression model	Variables	B	SE	Beta	t-ratio	VIF
	Police effectiveness	0.159	0.024	0.258	6.631*	1.834
	Procedural justice	0.124	0.008	0.585	14.983*	1.842
	Obligation to obey the law	0.025	0.024	0.030	1.042	0.025
	Age	0.026	0.019	0.040	1.397	0.026
	Male	-0.013	0.085	-0.004	-0.155	-0.013
	Constant	-1.153	0.320	---	-3.600	---
	F-test	148.114*				
	R^2	0.613				

$p < 0.05$

Variables	B	SE	Beta	t-ratio	VIF
Police effectiveness	0.026	0.053	0.028	0.481	1.842
Procedural justice	0.074	0.018	0.239	4.049*	1.651
Obligation to obey the law	0.199	0.054	0.161	3.681*	1.014
Age	0.048	0.042	0.050	1.139	0.048
Male	0.558	0.188	0.130	2.976*	0.558
Constant	3.750	0.711	---	5.278	---
F-test	11.871*				
R²	0.112				

Table 6: Obligation to obey the police OLS regression model

*p < 0.05

Because the evaluation of the Pearson's correlation coefficients indicated that trust in the police has a much stronger influence on considered variables than an obligation to obey the police, additional regression models were created in order to confirm this observation. Tables 5, 6, 7 present three OLS equations for two elements of police legitimacy (trust in the police and an obligation to obey the law), as well as a willingness to cooperate with the police. The first one exhibited that in the case of trust in the police only police effectiveness and procedural justice have statistically significant influence. According to the second regression model procedural justice, an obligation to obey the police and gender were statistically significant factors determining an obligation to obey the police. The third model indicated that none of the police legitimacy elements had a visible impact on the cooperation with the police. With regard to the explanatory power, it is also worth mentioning that the trust in the police model accounted for the most amount of variation (61%), which is consistent with the previously noted importance of trust in the police in elucidating students' attitudes to this law enforcement institution.

Variables	B	SE	Beta	t-ratio	VIF
Police effectiveness	0.253	0.075	0.197	0.197*	1.784
Trust in police	0.173	0.123	0.083	0.083	1.842
Obligation to obey the police	0.001	0.066	0.000	0.000	1.126
Obligation to obey the law	0.291	0.078	0.166	0.166*	1.043
Age	0.102	0.060	0.075	0.075	1.018
Male	-0.047	0.270	-0.008	-0.008	1.025
Constant	9.447	0.998	---	9.464	---
F-test	9.087*				
R²	0.104				

Table 7: Cooperation with the police OLS regression model 2

*p < 0.05

6   DISCUSSION

The presented results show that the greatest impact on the legitimacy of the police among Polish students is made by the perceived procedural justice of police activities, and what is more, the latter has a particularly strong influence on the trust in the police declared by the students. On the other hand, the relationship between the perceived police legitimacy and cooperation with the police assumed by the creators of the process-based model of policing is confirmed to a much lesser extent. Although the correlation coefficients indicate this dependency, it is not confirmed by the regression model which proves only the influences of police effectiveness and an obligation to obey the law on the declared willingness to cooperate with the police. What is worth mentioning, the former (police effectiveness) operationalized as judgment for how well the police deal with crime and disorder also has a visible impact on police legitimacy. These empirically founded conclusions, besides their practical ramifications, can be treated as an important contribution to the ongoing international discussions about the generality of the process-based model of policing and the various ways of conceptualizing and operationalizing police legitimacy and trust in the police. Broadly speaking, the findings from this study bear three main issues that require further discussion.

The first issue relates to the fact that it is still necessary to debate how to conceptualize and operationalize legitimacy, especially one of its components – trust in the police. In accordance with not only the presented findings but also the Polish understanding of legitimacy (see Polish Background) and new definitions of legitimacy which can be found in the literature (Jackson et al., 2012; Tyler & Jackson, 2013), it seems to be necessary to consider and confirm empirically different ways of defining police legitimacy and trust in the police. First, it is important to note that there are fundamental conceptual and measurement problems with the current approach. The existing literature about legitimacy and empirical analyses of this construction are heavily influenced by psychological theories and, consequently, rely mostly on the data from people's subjective evaluations. As a result, some theorists, often referring to Beetham (1991) and the earlier mentioned importance of compatibility between the legal validity of power and the shared values of society, stress the necessity to take into account also objective indicators of legitimacy (Peršak, 2014). More importantly, there are also some arguments for separating the two components of the classical definition of legitimacy. For example, Bottoms and Tankebe (2012) believe that trust tends to be future-oriented and that legitimacy is a concept focused on the present. Putting aside the theoretical explanation, the findings definitely support the alternative conceptual approach to legitimacy and trust. Drawing on the latest work by Jackson et al. (2012), there is a contention that police legitimacy should be operationalized with questions about the extent to which the directives of the police have to be obeyed and whether police officers reflect the values of the society while trust in the police ought to be identified with the perception of police effectiveness and procedural justice. These deliberations are beyond the scope of the present article, but addressing them empirically is a matter of urgency.

The second point concerns general applicability of the process-based model of policing. As it was noted at the outset, the vast majority of research on different aspects of this model have been conducted in the United States. The Polish study expands these research projects and confirms one of the two key hypotheses derived from the findings reported from the US-based studies. Namely, the results from the regression models support the contention that procedural justice judgments shape people's perception of police legitimacy. However, the question remains as to whether procedural justice and police legitimacy have similar effects in other European countries. Future researchers who conduct studies similar to the one presented here could provide more insight into the generality of this tenet associated with the process-based model of policing. These studies could also help explain the impact of police effectiveness not only on police legitimacy but also on cooperation with the police, whose impact is indicated by this research. Moreover, the Polish study raises questions regarding the role of legitimacy in shaping a willingness to cooperate with the police. Most often the conclusions drawn about the legitimacy-cooperation link portray the process-based model as a general theory, capable of explaining a willingness to cooperate declared by people all over the world. The findings reported above fail to support this nexus. In combination with other studies on public cooperation with the police (Reisig et al., 2012), it becomes evident that a more cautious approach should be adopted in order to avoid treating the process-based model as a set of general tenets, but rather as a middle-range theory with a limited explanatory scope. In other words, it might be assumed that there are some limitations in applying the process-based model of regulation to a post-socialist country such as Poland. It is not excluded that these limitations are referred to the fact that, according to the Polish study, trust in the police was not confirmed as a distinct empirical variable composing the police legitimacy scale (see Measures).

Finally, the findings from this study support and inform police policy and practice. As long as it is assumed that the police should focus on such correlates of crime as concentrated poverty, family pathology and genetic predisposition to crime while deterrence-based policing strategies are overrated, the notion of common sense according to which the police is not able to do much to reduce crime rates will not change. The presented study proves that if the police cultivate legitimacy by promoting fair practices and exercising their authority effectively, they will be able to rely more on local communities. Indeed, the research indicates that citizens who perceive the police to behave in effective and procedurally just ways are more likely to perceive them as legitimate and are also more willing to participate in crime prevention programs (Reisig, 2007). In spite of the fact that the Polish research does not confirm entirely the second tendency, the systematic support of prior studies (see The Process-Based Model) clearly shows that police officials in Poland should start developing training curricula that teach fair and effective practices. Although the process-based model is not a universal solution, policing activities perceived as just and effective will be more powerful when integrated into broader policing strategies such as community policing. In the case of the Polish society, an application of police-based model tenets could be particularly helpful in taking into consideration a broader context of law-oriented

behaviours compounded, *inter alia*, by trust in public institutions and socially important values. Polish sociologist, Sztompka (1999) believes that these are the crucial determinants of political and social transformation which, of course, also concern police policy and particular practices provided by police authorities.

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Appendix A

Table 8: Characteristics of the sample

Variables		n	%
Gender	Female	322	63.6
	Male	184	36.4
Age	19–20	129	25.5
	21–22	158	31.2
	23–24	154	30.2
	25–30	66	13.0
University[a]	University in Gdańsk	205	40.5
	Warsaw University	85	16.8
	Jagiellonian University	63	12.5
	Andrzej Frycz Modrzewski Academy in Krakow	37	7.3
	Adam Mickiewicz University in Poznań	33	6.5
	University in Szczecin	29	5.7
	Nicolaus Copernicus University in Toruń	26	5.2
	Police Academy in Szczytno	15	3.0
	Naval Academy in Gdynia	6	1.2
	National Defence University of Warsaw	1	0.2
	University of Silesia in Katowice	1	0.2
Faculty[b]	Law	374	74.9
	Administration	49	9.8
	Security	84	16.8
Year of study	I	148	39.9
	II	107	21.6
	III	87	17.6
	IV	74	14.9
	V	79	16.0
Marital status	Single	248	49.0
	Single, but in a stable relationship	234	46.2
	Married	24	4.7

Varibles		n	%
Economic status	Own income	113	22.4
	Income from the family	329	65.1
	Grant	40	7.9
	Income from another source or person	23	4.6
Living arrangement[c]	Living alone	37	7.3
	Living with a partner	82	16.2
	Living with parents	217	43.0
	Living with roomate(s)	141	27.9
	Living dormitory	28	5.5
Parents' education	Primary school	3	0.6
	Vacational school	56	11.1
	High school	168	33.3
	University degree	259	51.3
	PhD	19	3.8
Social status	Far above the average	39	7.7
	Above average	195	38.7
	Average	233	46.2
	Below average	36	7.1
	Far below average	1	0.2

Table 8: continuation

[a, b] *Added to the polish survey,* [c] *Modified in the polish survey*

Appendix B

Scale	Items	M	SD
Procedural justice[a]	The police enforce the law consistently when dealing with all people	2.16	0.723
	The police provide the same quality of service to all citizens	2.43	0.742
	The police provide better services to wealthier citizens[*]	2.28	0.781
	The police give minorities less help because of their race[*]	2.62	0.734
	The police treat everyone with dignity	2.11	0.652
	The police are courteous to citizens they come into contact with	2.35	0.715
	The police respect the citizens' rights	2.56	0.683
	The police make decisions to handle problems fairly	2.53	0.655
	The police can be trusted to make decisions that are right for your community	2.59	0.735
	The police follow through on their decisions and promises they make	2.54	0.696
	The police make decisions based on the facts	2.53	0.070
	The police don't often listen to all of the citizens involved before deciding what to do	2.56	0.736
	The police explain their decisions to the people they deal with	2.39	0.710
	The police take time to listen to people	2.25	0.726

Table 9: Summary statistic for scale items

Table 9: continuation	Scale	Items	M	SD
	Police legitimacy[a]	I have confidence in the police	2.42	0.797
		You should accept police decisions even if you think they are wrong	3.47	0.658
		You should do what the police tell you to do even if you disagree	2.58	0.815
		You should do what the police tell you to do only if you understand the reasons for the directives[*]	2.42	0.658
		You should obey the directives of the police only if you consider their actions lawful[*]	1.53	0.815
	Coopera-tion with the police[b]	Imagine that you were out and saw someone steal a wallet. How likely would you be to call the police?	2.76	0.933
		If the police were looking for witnesses in a case where someone's wallet was stolen, how likely would you be to volunteer information if you witnessed the theft?	3.22	0.821
		Imagine you had evidence that someone bribed a government official. How likely would you be to report this behaviour to the police?	3.15	0.894
		How likely would you be to call the police if you saw someone break into a house or car?	3.76	0.533
		How likely would you be to volunteer to serve as a witness in a criminal court case involving a crime that you witnessed?	3.03	0.821
	Police effectiveness[b]	The police do a good job preventing crime in my neighbourhood	2.36	0.685
		The police do a good job maintaining order in my neighbourhood	2.60	0.712
		The police respond promptly to calls about crime	2.24	0.785
		The police do a good job controlling violent crime	2.30	0.715
	Obligation to obey the law[b]	It is okay to do anything you want as long as you don't hurt anyone[*]	2.68	0.933
		To make money, there are no right or wrong ways anymore, only easy ways and hard ways[*]	3.18	0.819
		Laws were made to be broken[*]	3.67	0.558

[a] *1 – Strongly disagree, 2 – Disagree, 3 – Agree, 4 – Strongly agree;* [b] *1 – Very unlikely, 2 – Unlikely, 3 – Likely, 4 – Very likely;* [*]*Reverse scored*