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Illegal Rural Enterprise – Developing a framework to help identify and investigate shadow infrastructures and illicit criminal networks

Purpose: This study builds on the extant research of the authors on Illegal Rural Enterprise [IRE]. However, instead of taking a single or micro case approach within specific sections of the farming and food industries we examine the concept holistically from a macro case perspective. Many IRE crimes simply could not be committed without insider knowledge and complicity, making it essential to appreciate this when researching or investigating such crimes.

Design/methodology/approach: Using data from published studies, we introduce the theoretical concept of 'Shadow infrastructure' to analyse and explain the prevalence and endurance of such criminal enterprises. Using a multiple case approach, we examine data across the cases to provide an analysis of several industry wide crimes - the illicit halal meat trade; the theft of sheep; the theft of tractors and plant; and the supply of illicit veterinary medicines.

Findings: We examine IRE crimes across various sectors to identify commonalities in practice and in relation to business models drawing from a multidisciplinary literature spanning business and criminology. Such enterprises can be are inter-linked. We also provide suggestions on investigating such structures.

Academic and practical implications: We identify academic and practical implications in relation to the investigation of IRE crime and from an academic perspective in relation to researching the phenomenon.

Social and policy implications: Include setting up a multi-agency intelligence hub to provide expert knowledge to the numerous agencies involved in investigating such crime.

What is the value of paper: Combining data from numerous individual studies from a macro perspective to provide practical solutions to a multi-faceted problem.

Key Words: Criminal Entrepreneurship, Illegal Rural Enterprise, Illicit Trade, Rural Policing, Shadow Infrastructures.

Introduction

This study focuses on the literature of UK based rural policing[1]. In the literature, it is acknowledged that although rural policing is of equal importance to urban policing it has been neglected in criminal justice research (Rudell, 2016; Meško and Bowden, 2023). Indeed, a review of the published articles in this journal highlights that few

relate specifically to rural policing, rural crime or its investigation. Nevertheless, with the development of rural criminology as a distinct sub-topic and the introduction of journals such as the International Journal of Rural Criminology, and the Routledge Handbook of Rural Criminology (Donnermeyer, 2016) studies of rural crime and policing are beginning to make an impact. Early studies focused on literature reviews and individual case studies (Smith, 2010) which although invaluable in presenting individual insights do not have the impact of comparative cross-case studies. This can be ascribed to a dearth of substantive published data and to the difficulty of researching the topic in closed communities. Policing and researching rural crime are difficult endeavours in that both the farming and criminal communities are reticent in talking to the authorities or to academics, practicing a form of Omertà making recruiting respondents difficult (Smith, 2010).

Nevertheless, there has been an increase in empirical, qualitative studies using case study and documentary research methodologies (see McElwee, Smith and Somerville, 2011; Smith and McElwee, 2013; Somerville, Smith and McElwee, 2015; Fenwick, 2015; Manning, Smith and Soon, 2016; Terpstra, 2017; McElwee, Smith and Lever, 2017; Smith, 2017; Smith, McElwee and Somerville, 2017; Goodall, 2019; Smith and McElwee, 2019; Goodall, 2021; Goodall, 2022). There is still a pressing need for further qualitative, empirical articles on rural policing and crime to move beyond the analysis of single cases and a constant reviewing and regurgitation of the literature. Moreover, there is a need to synthesise the literatures of rural crime and policing which do not always naturally align. Policing scholars examine rural policing strategies, tactics, and organisational perspectives relating to rural policing and the use of modern technology; whilst scholars of rural crime concentrate on emerging crime types. Much research focuses on policing initiatives and not on the communities, or the rural settings themselves and much of the literature is dated. Moreover, scholars of rural crime invariably ignore the literature on *illicit markets* and *shadow infrastructures* (Gallagher and Foster, 2021).

The research direction in rural crime focuses on predatory victimisation inflicted on the rural community by *urban marauders* (Smith, 2010). Although this polarised view has been challenged the notion of insider-crime is not taken seriously enough by scholars, the investigating authorities, nor the industry itself (McElwee, Smith and Somerville, 2011; Lynn et al, 2023). We argue that Illegal Rural Enterprise [IRE] crimes are part of an ongoing system of criminal enterprise facilitated by 'criminal capital' (Platt, 2015) and operationalised through 'illicit shadow networks' (Gallagher and Foster, 2021) involving both insiders and Organized Criminal Groups [OCGS]. Thus, although they are investigated as single cases, or scandals, they are criminal conspiracies operating within parallel supply chains, networks and mechanisms forming a 'Hidden Enterprise Culture' (Williams, 2008).

This necessitates consideration of socially constructed stereotypical representations of the rogue farmer versus the urban criminal. Based on this we developed our RQ – *Who is the serious and organised criminal?* To address this empirically, we draw on an extensive body of empirical research conducted over a fifteen-year period using the primary methodology of 'Documentary Research' (Scott, 2014). We examine 6 historic cases of IRE crime (McElwee, et al, 2011). Instead of taking a single or micro case approach within specific sections of the farming and food industries as in our earlier publications, we examine the concept holistically from a macro case perspective across our publication stream. We begin by presenting the literature on IRE and our corpus of work in this niche field of Rural Entrepreneurship to highlight the existence and importance of IRE from a practical and theoretical perspective with the purpose of moving the research agenda forward. To do so, we introduce a new conceptual framework relating to the theories of *'Illicit Trade'* (Scalia, 2017) and **'***Shadow Infrastructure'* (Gallagher and Foster, 2021) which is helpful in understanding IRE in particular, and much rural crime in general. Our aim is to stimulate a better understanding IRE and 'Criminal Entrepreneurship' amongst practitioners and academics and to highlight a contemporary policing issue by contributing to the

development of research in this field by examining an under researched aspect of rural policing that span the farming and food processing industries and transcend the rural and the urban whilst falling between the cracks in relation to existing policing structures, resources and investigative strategies.

Synthesizing and reviewing the Literature.

The traditional, accepted paradigm of rural crime presented in the media portrays farmers and rural enterprises as the victims of crime by virtue of '*Urban marauder'* and '*Alien conspiracy*' thesis (Paulsen, 2007; Smith, 2010). To challenge the fallacious assumption, of urban marauders being behind all rural crime, we coined the term 'Illegal Rural Enterprise' [IRE] to differentiate between crimes committed by industry-insiders and urban criminals (Smith, 2004; Smith, 2010; McElwee, Smith and Somerville, 2011; Smith and McElwee, 2014; Somerville, Smith and McElwee, 2015; Smith and McElwee, 2016). However, it is not a 'them-versus-us' paradigm but a complex symbiotic and parasitical arrangement. This review includes unavoidable self-referencing because we have authored the majority of publications in the IRE research stream.[2] Conceptually, IRE has been well received in rural criminology (Donnermeyer and DeKeseredy, 2013: Donnermeyer, 2016) for applying business school concepts. This study is a commentary on the evolution of our work stream.

We begin by developing an understanding of the 'Rogue Farmer' paradigm within the context of IRE; Illicit Trade, Illicit Economies and Shadow Infrastructures. It is necessary to explain the relationship of IRE to the literature and context of rural criminology because of the disparate nature of the literature spread across various disciplines and publication outputs. Rogue farmers, criminal farmers and industry-insiders operate in a particular crimino-entrepreneurial eco-system stereotypically represented as 'rogues' or 'chancers'. They escape scrutiny because they do not fit the accepted profile of the criminal and although they may be known to the police and

other agencies, they are not considered serious criminals. Rural criminology is a rapidly expanding sub-category of criminological theory because crime manifests itself differently in rural and urban areas (Donnermeyer and DeKeseredy, 2013). Rural criminology challenges contemporary thinking in critical criminology (DeKeseredy, 2016) - for example, Meško (2020) challenges the popular belief that rural communities are less criminogenic than urban area.

Illegal Rural Enterprise: The concepts of the "Rogue Farmer" and "Criminal Farmer" (Saltiel et al, 1992; Wiber, 1995; Smith, 2004; Heffernan, Nielsen, Thomson and Gunn, 2008; Smith, 2010; Smith, 2011, Smith and McElwee, 2016) are gaining traction in the literatures of criminology and rural sociology. Indeed, Wilkinson, Craig and Gaus (2010) refer to the "*Exploitative Farmer*" and Cross (2013) to the stereotype of the "*Bad Farmer*". When one examines the disparate crimes and statutory offences committed by rogue farmers they appear unconnected but closer scrutiny reveals that the motivations behind them are often economic examples of illegal pluriactive criminality. Most are deniable, low-risk criminal activities or 'alternative income generation' strategies. These generally involve obtaining an undeclared illicit rental income on a 'no-questions-asked' basis. These include renting outhouses to organized crime figures knowing they will be used for criminal purposes or 'off-the-books' enterprises. They can be statutory offences or illicit entrepreneurial ventures which may not be illegal but are immoral. Low risk activities are characterised by their nature as 'parsimonious' practices and thus protect livelihoods. Other examples include predatory high-risk crime accepted as criminal and entered into complicitly. As a form of 'Criminal Entrepreneurship' (Hobbs, 1996; Smith, 2004) it provides a competitive advantage. It benefits the criminal by providing an otherwise illegal service to complicit customers for a considerable profit. It is important because it receives little official consideration in contrast to outsider crime.

IRE crimes are complex and involve repeat commercial transactions, insider knowledge and complicity motivated by financial profit (Smith, 2021). Yet, there is no such crime as IRE which is a theoretical, academic concept with no official recognition. Nevertheless, illegal and Illicit crimes, particularly large-scale one's are inevitably connected to OC and form 'Illicit economies' which traditionally have received little attention from governments and international organizations (Felbab-Brown 2017). This is particularly true of OC in rural communities and to IRE. The problem with such crime in rural communities, and with the illicit economies they generate, is that although they are serious and organized are not deemed serious enough to allocate scarce investigative resources. Consequentially, they are considered low priority. Such crimes replicate business per se where order and stability are required which dictates that they must mirror established business practices complete with premises, transport routes and supply chains. This requires the implementation of business practices and different skills and attributes than traditional OC. They require a high level of financing and access to capital (Smith and McElwee, 2016) and the risks are usually lower than in engaging in other forms of OC. Their implementation requires the possession of entrepreneurial social capital as opposed to criminal social capital (Firkin, 2003). IRE exists at the boundaries of enterprise and organized criminal behaviour as a distinctive modus operandi which differs from more established orthodox forms of criminality. IRE is connected to 'Business Crime' and 'White Collar Criminality' (Sutherland, 1945) committed by networks of criminally inclined businessmen. Indeed, IRE requires the possession of business acumen or nouse and may be committed by otherwise apparently law abiding individuals.

Illicit trade, illicit economies and shadow infrastructures: We argue that '**Illicit Trade'** (Scalia, 2017) which involves legal and illegal aspects plays a significant part in IRE crimes committed via complex '*Shadow Infrastructure'* (Gallagher and Foster, 2021) which spans both legitimate and criminal networks, operating in '*Shadow*

Economies; (Schneider and Enste, 2013). Nevertheless, illicit economies pose socio-economic threats to the stability of nation States, are highly complex and unseen in nature (Felbab-Brown 2017:3) and because they generate both positive and negative consequences they can influence local and national GDPs. As illicit operators they operate with impunity to lie, cheat and steal at will (Green, 2006). Perpetrators of IRE seldom exhibit signs of 'gangsterism' and violence associated with traditional OC reinforcing their low priority. Moreover, illicit economies are managed by a criminal business elite (Scalia, 2017) but with IRE we know very little about those behind such crimes committed by industry-insiders. In addition, some IRE activities operate within the context of the informal economy (Williams, 2008) which exists and operates in tandem to the formal one (Paoli, 2003). It is a constantly changing marketplace, because of the adaptability of OCGs and market conditions.

In defining illicit trade, we use the definition posited by the World Custom Organisation.[3] This is important because illicit trade is a broad collection of phenomena requiring a broad palate of coordinated policy responses, but unlike other serious crime which produces highly visible incidents, the majority of such crimes and illicit trade remain below the surface (Scalia, 2017). This impedes the necessity for the mobilization of the political will to address the threat and that a common facet of illicit economies is that any illicit trade generates a traceable 'illicit financial flow' (Lallerstedt, 2018). Moreover, all forms of illicit trade constitute criminal activity and a major problem in determining the scale of the problem is exacerbated by the fact that law enforcement agencies, intelligence agencies and the private enterprises and individuals effected are understandably reluctant the share their individual insights openly (Lallerstedt, 2018). According to Lallerstedt, any enterprise requires money to operate, even when the business is organized crime.

One of the issues with police investigations into IRE crimes is that they position the criminal within an underground economy whereas in reality there is very little separation between the criminal and business communities. Indeed, Ruggiero (1996:1)

argues that OC and the legitimate economy are two complimentary sides of the same economic interaction and contemporary capitalism relies on the interaction between legality and illegality. Gottschalk (2021) argues that white-collar criminals often commit crime because it is both convenient and profitable to do so citing 'convenience theory' as a motivating factor. It is often impossible to make an accurate measurement of the scale of the problem in individual industries forcing analysts to rely on rough estimates, proxy measures and best guestimates in relation to the financial aspects of the problems. Thus the fundamental driver behind any illicit trade is the revenue generated from the product of services. In traditional OC, the profits generated from one criminal activity are used to fund the perpetration of other OCs but with IRE crimes it is not known if this is the case.

Sciarrone (2011) refers to a "grey zone" between the legal and illicit economic spheres who share the same networks and form relationships with industry professionals and entrepreneurs. This is exciting, albeit we know very little about the *mechanisms* (Netto, 2019) behind the criminal elite or about the interface between the legal and illicit economies or so-called *dirty economies* (Ruggiero, 1996). In such economies, shadow infrastructures are an invisible but necessary mechanism (Gallagher and Foster, 2021). We expand the concept to include parallel networks and supply chains and the connections and nodes between said legitimate business models, networks and supply chains. Shadow infrastructures are ultimately channels through which business whether legal or illicit is conducted and these infrastructures link legitimate business and OC. Infrastructures are "*the physical networks through which goods, ideas, waste, power, people, and finance are trafficked*" (Larkin, 2013, p.123). Moreover, Gallagher and Foster refer to so-called 'bad-actors' who span the legitimate and illegal domains (our insiders). Notably, the links between the formal and informal economies and the legitimate and shadow infrastructures relate both to industry networks, linked supply chains and linking nodes extending deep into the communities. The farming and the food industry are interlinked and cannot be separated from the supply chain nodes.

Farmers and other industry actors [as 'bad-actors'] meet together at their local mart, agricultural and food shows, farmers marts/markets and at farm sales etc not regularly frequented by outsiders nor the police.

Methodology

The main methodology employed is Documentary Research (Scott, 2014). Using data from existing published studies we provide a contextualised discussion of what constitutes IRE before interrogating theory from criminology which helps explain the power and persistence of IRE and the relevance of the theoretical concept of 'Shadow infrastructure' (Gallagher and Foster, 2021) to help analyse and explain the prevalence and endurance of such criminal enterprises. Using a multiple case study approach (Yin, 2013), we examine the data, arguments and findings across the cases to provide an analysis of several industry wide crimes, including:

Example 1: Illegal Halal meat scandal (Smith, 2004; Smith and McElwee, 2021).

Case 2: The "Euro-vet scandal" (Smith and Whiting, 2013).

Case 3: The "Black Fish scandal" (Smith, 2015).

Case 4: The Theft of Tractors and Plant (Smith and McElwee, 2016).

Case 5: The theft of 'Sheep and Livestock' (Smith, 2017).

Case 6: The farming and waste disposal nexus in the UK (Smith, 2021).

As in the earlier studies we analysed the data using a predetermined research criteria looking for patterns, similarities and differences across themes. In all of the scenarios insider knowledge and involvement; the involvement of pre-existing business practices, supply chains and legitimate accomplices; and the flouting of low tariff regulations that avoided serious criminal charges; and haphazard law enforcement structures were present. Our analysis was driven by the application of key concepts around illegal enterprise in relation to how they were applied to rural criminality and policing. This ensured that issues of validity and generalisation were addressed with consistency across the six cases all of which reported on complex criminal scenarios

and for the triangulation, analytic generalisation and evaluation of the data using the theories of IRE, Illicit Trade etc to inform and guide the conceptual and theoretical integrity of the case stories generated ensuring that the findings across the cases were generalizable and grounded in similar contexts.[4] To achieve this we engaged in the process of 'Constant Comparative Analysis' (CPA) (Glaser, 1965; Glaser and Strauss, 1967; Tesch, 1990; Anderson, 1995; Anderson and Jack, 2015) across the cases. CPA is a common-sense approach for examining qualitative data enabling one to better understand it by comparing it across whole cases or identified codes and themes to spot patterns, highlight conceptual differences and similarities by creating and refining categories and analytic themes (Glaser, 1965: Tesch, 1990). It involves ongoing sampling and can be done by memory (Glaser and Straus, 1967). In the original studies we read and reread the documentary data and conducted CPA coding systematically and thoroughly within the scenarios using post-it notes and in this study we conducted the analysis across the scenarios writing memos and constantly re-examining the emergent codes by comparing thematic data applicable to each category before integrating the categories to delimit and draft plausible theory to become closer and more familiar with the data. This analytic process was aided by all the cases being constructed using the same criteria from documentary research methodology. The original case studies involved analysing the activities of over 60 criminal entrepreneurs.

Case presentation, analysis and discussion

In the cases presented in table 1, using constant comparative analysis across the cases a common narrative thread relating to Illegal Trade and Shadow Infrastructures emerged:

Case.	Narrative thread.	Comparative analysis.
Halal meat scandal.	This case relates to the criminal activities of the notorious Julian Jones and numerous co-conspirators over a 15 year period when he appeared to mastermind the illegal Halal	Individually and collectively the CPA conducted highlighted emerging themes including insider knowledge and involvement; the involvement of pre-existing business practices, supply chains and

	'Smokies' trade in the UK. Tracking his career longitudinally we established he was active over the length and breadth of the country and was arrested in various locations with incriminating evidence implicating him in the illegal trade. He accrued a considerable amount of convictions but each case was treated as a one-off statutory infringement and not a continuing criminal conspiracy. However, from a longitudinal analysis it became evident that he was not the mastermind but a manager in the criminal venture – shadow infrastructure. Jones fled the UK circa 2016 but the trade continues unabated albeit the authorities do not appear to have intelligence on his replacement.	legitimate accomplices; and the flouting of low tariff regulations that avoided serious criminal charges; and haphazard law enforcement structures which were all present in the scenarios encountered in the studies. We had initially labelled and theorised these behaviours and practices as IRE and the bad-actors as Rogue or Criminal Farmers. However after conducting the CPA across the scenarios we realised that collectively they all evidenced the presence of a considerable shadow network involving a variety of bad-actors including financiers, middle-men, hauliers, butchers and abattoir owners, organized criminals down to foot-soldiers. Applying the theoretical labels of Shadow Infrastructures and Illicit Trades helped make more sense of these organised criminal networks. As illicit/illegal trades they service a dark supply chain on a weekly basis. In relation to the halal scenario the volume of carcasses involved and the insider knowledge necessary indicates that it is an organised criminal venture conducted by industry insiders thus evidencing collusion amongst the farming community and meat trade. Likewise, in the Eurovet, Black Fish and tractor theft scenarios it was evident that they were criminal ventures serviced by shadow infrastructure, illicit trade and shadow economies and characterised by palpable collusion in the farming and equine industries. In the Euro Vet scenario although several customers were charged others were treated as witnesses and numerous leads were not pursued. The Black Fish scenario was a sophisticated criminal venture run in tandem with legitimate trade. Shadow infrastructure included hidden storage tanks and elevators so that even factory workers were unaware of. The fish were sold through the legitimate channels but the profit not declared to the taxman. In relation to tractor theft the shadow infrastructure involves commercial supply chains including freight containers to ship the stolen goods abroad. These are obviously continuing criminal enterprises and in the tractor theft scenario the OCGs involved employ thieves with a knowledge of farming and plant. An analysis of the sheep theft scenario confirmed criminal collusion between rogue farmers, farm workers and urban marauders. The sheep theft scenario is patently an ongoing criminal venture as is the farming waste disposal nexus where there is evidence of collusion between farmers and criminals. All the scenarios involved analysing the cases longitudinally through time. The narrative thread relating the shadow infrastructure discussed above evidences that the IRE activities discussed
Euro-vet scandal.	This case was examined post-conviction using documentary research methodology and from our readings and analysis it was evident that this was a continuing fraud involving the supply of veterinary medicine to farmers and the equine industry. It involved an online ordering system and depots in the UK and Europe. The fraud involved supplying medicines and other veterinary products from outside the UK which did not meet the strict UK guidelines.	
Black Fish scandal.	This case was also examined post-conviction. The fraud was perpetuated by a cartel of fish processors and fisherman keeping the so-called 'blackfish' caught over their allowed quotas and laundering them through their legitimate businesses/factories. It was uncovered by a forensic accountant who spotted financial irregularities who blew the whistle.	
Tractor and Plant theft.	This case was examined post-conviction examining the activities of ten OCGs involved in the illegal trade. We established evidence of collusion amongst some farmers and organized criminals who steal tractors and plant to order for sale in the developing world.	
Sheep theft.	This case was examined post-conviction examining- twenty convicted cases. The crimes involve insider knowledge and farming skills such as access to sheep dogs/quad bikes and trailers is necessary as is having a shadow infrastructure to launder the sheep before they are sold into the abattoir systems.	
The UK farming-waste	This case was examined post-conviction using documentary research and reported on five cases where farmers were directly involved in	

disposal nexus.	disposing of waste by wrapping it up in plastic covered bales and storing them on the farm or acting as unofficial dumping sites. The farmers had the spare storage capacity and the technology and equipment to facilitate the crimes. It is a continuing criminal venture.	constitute a 'Illicit Trades' (Scalia, 2017), 'Illicit Economies' and are operationalised via standing 'Shadow Infrastructures' (Gallagher and Foster, 2021) closely related to legitimate business interests and indeed are difficult to disentangle in reality thus ascertaining where the line between legal and illegal practices begins and ends is both complex, difficult and challenging.

The overarching narrative of table 1 enabled a meaningful comparison between the previously published studies allowing for longitudinal and comparative findings across the studies. What the narrative tells us is that it is easier for governments and societies to ignore the problem than deal with it head on despite the hidden and insidious nature of the crimes (Felbab-Brown 2017:3) and because there are seldom overt signs of crime they operate undetected. The continuous nature of the shadow criminal activities allow the illicit operators to operate with impunity making them low priority crimes seldom officially recorded. The absence of an identifiable criminal elite (Scalia, 2015) makes them easy to ignore. All of these factors coalesce to ensure there is no one to blame or scapegoat. We simply do not know enough about the financial elite behind such crimes or their links to industry-insiders and Criminal Mafias highlighting a need to profile their modus operandi and modus vivendi and develop better typologies (Smith, 2009). We need to better understand links between the 'Informal Economy' (Williams, 2008) and its interface with the formal (Poali, 2003) to help us better understand the constantly changing business environment, market conditions, marketplaces and the changing face of OCGs who innovate and adapt quickly to the changing circumstances.

The cases discussed fit the criteria for Illicit Trade as defined by the World Custom Organisation in that they all involve the transfer of money, goods or value gained from illegal and otherwise unethical activity. They encompass a variety of illegal trading activities including fraud, theft and environmental crime and all have identifiable illicit financial flows operating in a similar manner to Netto's

'Mechanisms' in that they are standing commercial structures designed to facilitate repeat business. Whether they are industry specific mafias or cartels is irrelevant because the existence of the structures ensures business continuity even if individual players are arrested and imprisoned.

From our analysis it is apparent that what unites these cases is that they typically involve a deliberate decision to engage in illegal activities for profit to build on and maximise the profits of their legal businesses. Indeed, our main finding and message is that collectively the dual concepts of 'Shadow Infrastructures' and 'Illicit Trade' help explain the complexity of much IRE crime and food-fraud committed by criminal entrepreneurs mirroring legal entrepreneurial business practices and not 'one-off' criminal activities. The crimes involve the utilisation of skills appropriate to their business and industry activities and can be committed in a short period of time and profits laundered alongside legitimate assets. The crimes are committed on a regular basis. They operate from farms and/or private businesses to which the public and authorities have limited access and use avoidance and deterrence techniques to enable them to operate in secret and unfettered. Individually and collectively this ensures that the perpetrators avoid official scrutiny and detection. The acts committed are part of a wider criminal conspiracy and supply chain operating across counties and regions. The police and authorities operate under restrictive boundaries ensuring each part of the conspiracy is dealt with separately if interdicted in different areas. At present, there is no joined-up investigative mechanism for identifying and linking low-level crimes evidencing a pressing need for more proactive multi-agency approaches and joint investigations although they are costly and time-consuming taking several years from detection to prosecution. Sentences are minimal rendering the cases less serious, negating the need to address this via the legal system. Thus, despite the existence of the Fraud Units in the respective Food Standards Agencies in England, Wales, Scotland and Northern Ireland, there is not a unified Intelligence Hub

or Investigative Agency responsible for overseeing food-fraud and farm crime making IRE crimes lucrative with limited risks and penalties associated with serious crimes.

These illicit trades whether they be in sheep, tractors or veterinary products require a broad and varied palate of coordinated policy responses which at present are not in place rendering the majority of such crimes and illicit trade invisible (Scalia, 2015). There does not appear to be the political will to mobilize the resources to tackle the threat or the traceable illicit financial flows that characterise illicit economies (Lallerstedt, 2018). This creates deniable 'grey zones' (Sciarrone, 2011) and until we can better understand the real scale of the problem illicit trade and associated criminal activities will continue to spread. One of the first steps required is for the authorities to acknowledge the existence of IRE, insider-crime and that illicit trades are not committed by mythical mafia figures but by industry insiders in collusion with organized criminals. In reality there is very little separation between the criminal and business communities as argued by Ruggiero (1996) and Gottschalk (2021). Both engage in symbiotic economic interactions which are complimentary to each other when aligned to contemporary capitalism. It is too convenient for those involved in the illicit trade to commit profitable low-risk crime. These shadow infrastructures and parallel networks are invisible but necessary mechanisms (Larkin, 2013) and it behooves us to better understand the supply chain networks and nodes involved and how the illicit trades operate. This will require a considerable investment in time and money but intelligence systems take time to develop and proper liaison and trust are the life blood of intelligence gathering. The added value of the comparison / summarisation across cases lies in linking the existing themes to those of Illicit Trade and Shadow Infrastructures which have great potential in creating an investigative framework for such crimes.

Drawing tentative conclusions

This study provides an overview of the issues surrounding IRE through a multiple case study approach and a synthesis of the literatures of rural policing, IRE and Rural Criminology linked to the business and business crime literatures. This study in conjoining these literatures makes a contribution by moving the debate beyond the individual crime and criminals to take cognisance of the role of illicit trade and shadow infrastructures in generating enterprise crime associated with long term criminal networks and markets which operate with impunity despite being OCBs. There are academic, practical and policy implications to be learned from this study. However, the greatest strength of the study lies in its comparative nature and the potentially wide reaching implications for both researchers and for practice because it is necessary to commission further research to implement the suggestions made below to focus on the changes needed to the way illegal rural enterprise is considered by the police and the wider legal system. Nevertheless, policy and law makers, intelligence and law enforcement agencies require to take urgent action to address the situation and policy makers and legislators need to draft new legislation in relation to negating the financial gains accrued by committing IRE crimes. Those involved only commit the statuary offences for financial gain and the offences are merely blunt instruments. Cognisance needs to be taken of the organized criminality involved in their commission from the investigation of the crime to the prosecution. There is a need to follow the money trail (Platt, 2015) because as argued by Lallerstedt, all enterprises require money to operate, even when the business is OC. There is also an urgent need for academics to conduct more empirical research with the private enterprises and criminal elites involved who are understandably reluctant the share their individual insights openly (Lallerstedt, 2018). Policy implications include setting up a multi-agency intelligence hub to provide expert knowledge to the numerous agencies involved in investigating such crime. However the key conclusions from the above case studies support the need to revisit and recognise the issues of IRE from a multi-disciplinary perspective.

To return to the original thesis that rural crime is committed solely by predatory urban marauders (Paulsen, 2007; Smith, 2010) the above cases suggest that the true picture is more complex than that and that although much crime is committed by urban based OCGs many crimes require insider knowledge and that organized rural criminality requires collusion between the urban criminal, rogue farmer or entrepreneur. Thus to answer the RQ - who is the serious and organized criminal behind rural crime it is evident that both faces of OC are present and that illicit trades, illegal economies and shadow infrastructures are ever present features of such criminality.

Our main take-away points are that IRE crimes involve a high level of collusion between the conspiring criminals and their customers differentiating them from traditional, predatory OC. Yet there is a definite gap between the perceived seriousness of the crimes and the sentences and punishments handed out to those caught by the authorities. When such cases are identified and prosecuted, it is often low-level employees involved in the day-to-day running of the criminal ventures who are caught and penalised, not organized criminals and rogue farmers. The kingpins and financiers of such ventures are seldom identified and interdicted, leaving them free to lead their criminal business unhindered in perpetuity. They are insulated from detection because they know that the resultant investigations will end when the appropriate crimes and offences have been investigated in sufficient depth to prove the case. They continue to operate by moving operations to new locations or premises safe in the knowledge that it may take considerable time before the authorities gather sufficient intelligence to disrupt them again and that their complicit accomplices are unlikely to inform on them.

There is a pressing need for the authorities to identify such 'bad actors', develop profiles of their offending and craft new investigative strategies and tactics to tackle the issues in real time. We desperately need to identify the 'Shadow infrastructures' and 'Dirty economies' behind them and map their ontological development across time. It is evident from our analysis that there is industry wide collusion with few instances being punished. Invariably they are treated as witnesses and few are

identified, targeted and prosecuted. There are pragmatic reasons behind this with limited resources, skills or time to properly investigate the illegal customer supply chains and shadow infrastructures. There needs to be a mechanism for recording such customer related complicity and for dealing with it via a Fixed Penalty Fine or HMRC sanction. This would be a major step towards discouraging such complicity. In addition, there is a need for legislation to reinforce the seriousness of criminal conspiracies; and for multi-agency training in investigative practices. We are unaware of any UK training courses on investigating rural crime or specifically on rural policing. To augment this there is a need for a properly resourced national intelligence and investigation agency to tackle such crimes. Such illicit practices and their 'shadow infrastructures' have been ongoing for generations and unless there is a concentrated response then they will likely continue for generations to come thus we need to better understand how criminals utilise these.

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End Notes

[1] There is an expanding literature on rural policing and food fraud in an Australian and US context (Shears, 2010; Harkness, 2017; Donnermeyer, 2018; Barclay, 2023; Lynn et al, 2023) out with the scope of this study.

[2] One problem we face is that although our research stream is becoming well cited in entrepreneurship and rural criminology there are so few authors doing similar research hence the difficulty in citing the work of others. As pioneers it is difficult to cite work which is not there.

[3] *"Illicit trade involves money, goods or value gained from illegal and otherwise unethical activity. It encompasses a variety of illegal trading activities including human trafficking, environmental crime, illegal trade in natural resources, intellectual property infringements, trade in certain substances that cause health or safety risks, smuggling of excisable goods, trade in illegal drugs and a variety of illicit financial flows".*

[4] Our use of published cases is illustrative. This strategy was deliberate because we designed the overarching research stream with comparability in mind, choosing documentary research across studies to facilitate this.