

## Diffusion of Knowledge, Learning, “Technology Transfer” & Change in Rural Communities: WIDE Discussion Brief No.10 of 10<sup>i</sup>

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### Key messages from the WIDE evidence

- Ethiopia has been **praised for innovative systems** of developmental outreach: WIDE data document how this has resulted in an energetic state-led trajectory of rural transformation.
- Nevertheless **“one size does not fit all”**: technology transfer via governmental packages or models is not always **tailored** to potential economic niches in each location; nor **sensitively communicated**; nor successfully **piloted or demonstrated** amongst those best able to use it.
  - “technology transfer” outcomes could be further improved by **closer attention** to the:
    - specificity of **very local opportunities** for learning and innovation;
    - sophistication of the **informal social knowledge diffusion** processes and **local calculations of interest** that underpin effective “technology transfer”; and to the
    - developmental potential of local emulation of **individual or “outlier” innovation**;
  - ...all of this local nuance is hard to capture by means of **quantitative targets or national packages**.
- The **expansion of irrigation** often shifts wider economic interests and opportunities locally: this triggers innovative practices and change well beyond agriculturalists.
  - It offers new **experiences of diverse** and/or **cash crop production** from new **wage** and/or **daily labour**;
  - promotes local **market networks** and relations with traders;
  - **diversifies** both **livelihoods** and **food consumption**; and consequently it
  - helps **improve food security** in areas where production has been insecure;
  - increases the potential for **significant enrichment** of some (not all) community members; and
  - **boosts urban linkages**.
    - Initiatives to **enhance rural job creation** could focus on exploiting all aspects of micro socio-economic change emerging around irrigation: new demands for **local services to labourers or traders**; private sector opportunities in growing **local cash economies**.
    - Those who have success from irrigation **innovate cautiously, spreading risk** across income sources: a widespread strategy Government might adopt when seeking to boost production.
    - More than one type or scale of irrigation system should be considered, with support to **interventions and initiatives of different types** suited to local ecologies or economies.
- Agricultural and other innovation in rural areas is **extremely vigorous and diverse**, across **all demographic groups** and individuals: it covers economic activities as well as social, cultural and other community beliefs and practices; many of these reinforce one another.
- The learning behind innovation is **non-linear, unpredictable**, and often very **localised**; and

the most successful innovation or adaptation is often **not from formal models**: neighbours including **resettled communities, returnees and migrants, students and other family members** all emerge as key (often unexpected) **exemplars** of new practices.

- Innovation often reflects a growing **entrepreneurial awareness** amongst individuals in rural areas that connects both with **emergent inequality** and with the **growth of small urban centres**: micro-economic innovation (e.g animal fattening or milk production) is **exceptionally sensitive to price fluctuations**, particularly -but not only- in agricultural growth areas.
  - **Strategies for boosting rural job creation, incomes and production** should learn from economic innovation beyond the formal MSE sector: not everyone is in a position to innovate, but those who do draw on **non-technical knowledge and resources**, as well as technical and/or technological skills.
- The wealth of rural evidence of successful informal adaptation and innovation indicates change is as much a function of **socio-economic resources, openings and opportunities** as of new attitudes – especially amongst young people, and in economically more dynamic communities.
  - Governmental approaches emphasising a combination of social (inter)action and learning through institutionalised systems of demonstration or models have had considerable success, but **approaches to “attitude change” need careful nuancing**.
- Innovation or its effects **can be negative** as well as positive; new practices associated with increased urban links, mobility, or changing gender relations and religious ideas regularly elicit different responses – even tensions - across generations or social sectors.
- The learning that underpins effective innovation does not normally result from “rolling out” a blanket programme of new knowledge. **Hierarchical attitudes that privilege “modern expertise”** may block community level innovation, and **subverting these attitudes** may be key to unleashing community learning.
  - government approaches could be further enhanced by:
    - systematic experimentation with **alternative models of policy learning/diffusion**;
    - stressing **endogenous innovation** and **social capital**;
    - exploring community-based initiatives to identify and exploit the developmental potential of **“positive deviance.”**
  - As the economy diversifies, local institutional capacity increases, and information and learning feedback loops improve, revising the approach of local state actors might help communities **retain, extend or innovate** with existing **“best practice”**, promoting **micro-level technology transfer** and **diffusion of knowledge**, that is **locally owned and locally generated**.

### Introduction: harnessing the innovative potential of the micro and the individual

It has recently been argued that “the Ethiopian peasant economy is in transition”, and that “there is no going back.”<sup>ii</sup> Longitudinal comparisons across WIDE data are replete with notions and instances of novelty, innovation, learning and change. Ethiopia has been widely **praised for its innovative systems** of developmental outreach, particularly for instance in relation to agriculture and health<sup>iii</sup>, and school enrolment (DB05:education).<sup>iv</sup> Nevertheless the lived experiences captured by Ethiopia WIDE at the micro-level demonstrate two things: that external interventions are only a part of the picture; and that they are not always the most effective part.

**Technology transfer** via governmental packages or models is **not always tailored** to potential economic niches in each location; nor sensitively communicated; nor successfully piloted or demonstrated amongst those best able to use it. This Brief examines highlights of the Ethiopia WIDE research data for evidence about **how, when and why knowledge diffusion, learning, innovation, and change occurred** (and when they did not); and the potential policy implications and lessons to be learned. WIDE research findings provide abundant evidence of innovation, learning and changes of practice in all of the communities studied, all of which **extend well beyond the influence of government per se**: this very diversity and complexity suggest that a **conception of a uniform hierarchy of expertise, “rolling out” new packages to animate passive recipient farmers is misleading**: arguably more likely to obscure than to illuminate the ways in which change occurs. The second half of this Brief looks at such change amongst individuals and wider community networks, in relation to:

- key patterns of **innovation in agriculture**, including from unexpected sources and examples;
- instances of the impact of **urban** culture, linkages and mobility;
- the role of **family members** and their ideational and material resources; and
- the importance of trade, status, and “**networks of success**”.

### Government strategies for innovation and technology transfer

An Ethiopian analyst now senior in government observed recently that

*innovation includes endogenous development, social learning, concerted action, emergence from interaction and institutional change (Yinager Dessie, 2012: 8).<sup>v</sup>*

This approach - **privileging collective learning and concerted action, to bring about changes of attitude and practices** - has formed the basis of Government strategy for **technology transfer in rural areas**. The approach to **learning, innovating, and “changing attitudes”** is at the heart of the **government’s developmental (and its political) strategies**. The system of working in an institutionalised way through models and networks is designed to maximise massive adoption of developmental innovations designed externally by government. A model farmer in Gedeo, for instance, agreed with his administrators that

*Successful and model farmers usually are good in accepting new things so when there is a new technology to be given to the community, the model and successful farmers are chosen to implement [it] first and are used as demonstration. (model farmer, Adado, 102)<sup>vi</sup>*

As in the Gedeo site (by no means the most innovative, dynamic or highly evolved of those studied), across the country members of **development teams** attend agricultural lessons, grow vegetables, and share experiences; members of women’s development teams “learn from each other and from their 1-5 groups” (*ibid.*, 128), whilst HEWs “give priority to those who accept new things and

teachings,” who are usually aged below 35 years (*ibid.*, 129). **One-to-five networks** reported having adopted new more efficient practices of rotating collaborative labour, rather than working alone (*ibid.*, 183). In many sites, those who were close to the *kebele*, or involved either as **models or party members**,<sup>vii</sup> appreciated their involvement in meetings as useful for getting quick access to “new ideas” or “new development interventions” (*cf.* DB09:*success*). **TV and radio were commonly cited sources of new ideas and innovation** (e.g. Aze Deboa/Kembata, 11; Gara Godo/Wolayitta, 183): awareness of HIV/AIDS increased, even in sites where no cases were known (Adado/Gedeo, 132/3); also “new ideas about the market” (*ibid.*, 32); and in several communities members thought watching TV was “good for the family [who tried to] implement what they had learnt to improve their living condition” (Adele Keke/East Harerghe, 18), such as health extension information (186). The system has delivered very significant new knowledge and developmental benefits, but (as discussed in DB-E:*models*) **could also be significantly improved and nuanced** better to meet rural needs and exploit rural economic opportunities. In particular, members of **wider social circles**, beyond those close to local administration, **were often largely unaware of, unengaged or uninterested in these initiatives**: the evidence for this apparently systemic problem is compelling.<sup>viii</sup>

### Negative experiences and failures of state-led innovation...

**Not all instances** of state-led technology transfer and innovation, then, **have been successful**.

Some problems seem to have arisen from **popular perspectives and priorities**. In most sites, **women’s associations and leagues** at *kebele* level had achieved little (Harresaw/Eastern Tigray, 55) or were barely functional (Do’oma/Gamo, 45), with leaders occasionally described as reluctant to work with *wereda* co-ordinators, or to take their responsibilities seriously. In Gelcha/East Shewa a well-to-do woman felt she was **unable to pass on training** she had received, as her peer group was reluctant to come together for long enough periods (120).

Other problems had to do with the **quality of the advice on offer**. In Gedeo again, **coffee and enset diseases** were introduced along with new hybrid seedlings (Adado, 2). Innovations liked by *kebele* officials did not seem to have been more widely taken up: composting and replacing seedlings regularly seemed to work, but a new variety of quick maturing coffee was unpopular (*ibid.*, 90). The idea of saving had been widely introduced, but many remained critical of an **acute unresolved shortage of credit**; and those who *had* taken loans had difficult experiences, despite attempts by Omo MFI to improve its recovery processes (*ibid.*, 120-1).

The WIDE data also indicate **Government-backed innovation** regularly had **undesirable and unexpected side effects**. The construction of a **new asphalt road** from the airport to Lalibella bypassed the site at Shumsheha/North Wollo (70), cutting economic opportunities and causing local frustration and anger. The **productive safety net programme** (PSNP) has had an important impact in changing incentive structures in several research sites, and whilst in some places it was seen as stimulating the work ethic (Gelcha/East Shewa, 14), in a number of other instances negative side effects were noted: in Gamo, for instance, respondents noted PSNP was “developing new attitudes” which were weakening traditions of voluntary collective community work (Do’oma, 86). **Changes in land administration** in Eastern Tigray in 2003EC had also had unfortunate consequences: bringing conflict between *gots* as responsibility shifted from the *tabia* structure (Harresaw, 63).

If women’s associations were weak, WIDE data indicated that interventions by **youth associations or co-operatives** also regularly suffered from all of these problems (*cf.* DB04:*youth*). Several instances of **collapsed** co-operatives and associations of youth or women were reported, where management had been inadequate as they grew, and initial contributions had been lost. Meanwhile, **model farmers frequently bore the brunt of frustration** when innovation experiences were negative: thus

“if farmers have problems with new seed which is incompatible with the area the first one attacked is the model farmer who adopted it first” (Gara Godo/Wolayitta, 73/4): getting the right personnel in place in the *kebele* in order to ensure success, remained a challenge (*ibid.*123).

### ...and the need for more nuanced innovation “packages”

Even **where state-led innovation worked**, WIDE data suggested that it has frequently **suffered from poor design or weak specificity** or weaknesses in popular engagement or participation (*cf.* DB-E:models). This seemed particularly true of initiatives for **livestock and fodder production or environmental protection**, but also of attempts to **create jobs and economic associations**. In Gamo an association set up to supply building materials to the *wereda* was banned by the *kebele* because of fears of its impact on a newly gazetted national park (Do’oma, 90). In the South Omo agro-pastoralist site goats died from eating a newly introduced grass (Luqa/Tsemay, 135); meanwhile, in an AGP site, where grass seed was introduced by DAs and some had planted it, other community members wanted better information about producing “man-made livestock feed” (Adado, 4).

**Costs were also problematic.** As in a number of sites, inflation had compromised community enthusiasm for ox fattening, as support under the AGP did not cover the initial purchase, and people began to “hate the project” (*ibid.*, 10). **High input prices** were also described as **barriers to the uptake of new ways of farming** being promoted in several sites including in Kembata (Aze Deboa, 59); meanwhile amongst agro-pastoralists at the site in East Shewa, the **absence of credit** acted as a break on the introduction of Borena bulls, which the community favoured, and which was being promoted elsewhere in the *wereda* (Gelcha, 84; *cf.* also Luqa/Tsemay). **Human error also contributed.** In East Harerghe, innovative tree planting near Keke Mountain had been undone by neighbours in the area (Adele Keke, 55); in Wollo, it succumbed to the thin dry soil of the area (Shumsheha, 69); whilst in Kembata the decision of the *kebele* to sell grass from new enclosures caused public resentment (Aze Deboa, 66). **Finally technology sometimes failed too.** In Gamo, heavy metal **ploughshares** advocated by DAs were rejected in favour of the wooden metal-tipped versions introduced by local settlers (Do’oma, 58; see also below); and an attempt at **rainwater harvesting** using plastic sheeting was abandoned after lack of rain in 2007, and theft of the materials (*ibid.*, 59).

In East Shewa, in a pattern reminiscent of findings of other work in ago-pastoralist areas, **obstacles thwarted official attempts to encourage young people to take up intensive cultivation:**

*First, some youth still refuse to engage in cultivation and sharecrop out the land to migrants and continue with their [agro-]pastoralist mode of life. Second, they have little experience with managing money and squander [it]. Third there is a tendency of many youth organisations focusing on one thing [e.g.] packing and loading onions without taking into account the demand, which results in less income than expected. (Wereda official, Gelcha/East Shewa, 64-5)*

- “technology transfer” outcomes could be further improved by **closer attention** to the specificity of **very local opportunities** for learning and innovation; and to the sophistication of the **informal social knowledge diffusion** processes and **local calculations of interest** that underpin effective “technology transfer”.
- However, this kind of local nuance is hard to capture by means of **quantitative targets or national packages**.

The underlying trajectory of rural change suggests that there is also plenty of successful state-led innovation, but these examples indicate that a **closer attention to endogenous learning, priorities and knowledge** would be helpful. As Commissioner Yinager also notes in the source cited,

*In addition to institutions, in recent research social capital is getting emphasis on the assumption*

that communities are more often efficient than state institutions and organizations in managing natural resources [...] (op.cit.: 10-11)

### Innovation in agriculture

Community innovation in and around agriculture is **extremely vigorous and diverse**, across **all demographic groups** and individuals: it extends into associated economic activities in other sectors, as well as social, cultural and other community beliefs and practices; and many of these different kinds of **innovation reinforce one another**. Agricultural innovation and dynamism, or diversification in or away from agriculture, are often at the centre of these processes.

- **Strategies for boosting rural job creation, incomes and production** should learn from economic innovation beyond the formal MSE sector.

#### The importance of irrigation

In particular the **introduction or expansion of irrigation** often shifts wider economic interests and opportunities locally: in almost all of the sites studied there was evidence that this triggers innovative practice and change well beyond agriculturalists. It offers local actors new **experiences of diverse** or **cash crop production**, and (like rural-urban linkages) offers new opportunities for **wage** and **daily labour** (cf. Somodo/Jimma, 19); it promotes local **market networks** and relations with traders; and increases the potential for **significant enrichment** of some (not all) community members; and in doing so it **boosts rural-urban linkages**

- Initiatives to **enhance rural job creation** could focus on exploiting all aspects of micro socio-economic change emerging in and around irrigation sites: new demands for **local services to labourers or traders**; and private sector opportunities in growing **local cash economies**.

In addition to the creation of vibrant micro-economic pockets, irrigation regularly has the effect of **diversifying** both **livelihoods** and **food consumption**; and it also tends to **boost food security** in areas of where production has been insecure (Gebelen and Harresaw/Eastern Tigray; Dinki/North Shewa; Korodegaga/Arssi; Do'oma/Gamo).

- Nevertheless, the evidence suggests that those who achieve economic success with irrigation **innovate cautiously, spreading risk** across income sources: a widespread strategy Government might adopt when seeking to boost production (or when tempted to advocate specialisation), especially given that even many of the more successful innovators may not yet have achieved sustainable economic gains (cf. DB09:success).

WIDE evidence regarding irrigation demonstrates its complexity. Irrigation co-operatives were reasonably effective in several of the sites (e.g. Shumsheha/Wollo, 113); others had dams and committees for pump and drip irrigation (e.g. Harresaw/Eastern Tigray); and in one, large tracts were identified for spate irrigation, as well as developed by a Self-Help Irrigation Association, by government, and by irrigation co-operatives (Korodegaga/Arssi). In at least three cases **irrigation has caused tension**, if not violence. Controversy emerged in the Arssi site over 29.5 hectares originally given to a youth co-operative for irrigation, which the *wereda* transferred to an Australian investor (31); in Jimma grazing land was given to investors for vegetables, meeting some resistance (Somodo, 5-6,19); and in Tsemay irrigation saw conflict with Konso incomers around the Woito River (Luqa, 17).

- More than one kind - and scale - of irrigation system should be considered, with support to **interventions and initiatives of different types** suited to local ecologies and economies, and protective of local interests.

### Other “innovative sources” of agricultural skills, change or diversification

Farmers and others innovated and appropriated skills in a variety of serendipitous ways, and from a range of **unusual or unanticipated external sources**: learning to tap underground water to expand irrigation by observing Chinese road construction in 2006, for instance, an exemplar that played at least as much of a role in local knowledge diffusion and behavioural change as government training (Adele Keke/East Harerghe, 12); graduating from agricultural and then construction daily labour by learning on the job to become a well-known builder, responsible for 20 houses and a local school (Aze Deboa/Kembata, 70); and taking advantage of the construction of the new airport in Lalibella in 1997/8 to become skilled in carpentry and construction, with a good enough income to stop farming (Shumsheha, 89). These and many other examples provide evidence of the socio-economic value of “positive deviance”<sup>x</sup>: **individuals noticing and appropriating the potential of changed practice** by departing from well established (often agricultural) work patterns or social norms (cf. DB09:success).

- The learning behind effective innovation is **non-linear, unpredictable**, and **serendipitous**, as well as often very **localised**, responsive to specific socio-economic circumstances. Intervention could ideally seek to emulate these patterns.

A particularly striking example of an **unusual external source of new ideas and innovation** that spread into a local community is in the evidence from the Gamo site where “community members have been learning new ideas from the working culture of the **Amhara immigrants** who introduced new crops and vegetables” (Do’oma, 9), as well as such techniques as repeated tilling, new planting technologies, and longer working hours (*ibid.*, 59). One model farmer “employed two Amhara immigrants to work on sorghum farming as they knew a lot about it” (*ibid.*, 57), and concluded the “immigrants had demonstrated it was possible to harvest considerable production from ¼ hectare of land” in contrast with the locals who had preferred crops that didn’t require intensive follow-up (*ibid.* 55). The outcome had been **significant changes in production techniques locally**, and much greater interest in higher technology production on both irrigated and dry land in the *kebele*.

- Development outcomes could also be improved with closer attention to the developmental potential of local communities emulating **individual or “outlier” innovation**, or learning from unexpected sources.

### Urbanity, modernity, and mobility

#### Young people and urban culture

Urban centres are widely seen from the (relatively more) rural WIDE sites as **centres of modernity or modernisation** (cf. DB01:(r)urbanization), and the **modern status** of those who have visited them is seen as variously marked: by learning Amharic, using a cell phone or wearing jeans or hats (Do’oma/Gamo, 164-5; Gara Godo/Welayitta, 183). **Young people** are widely credited with bringing innovative ideas from visiting cities – for **transportation** by motorbike for instance (Adado, 52; also Do’oma 67) - or because they had moved further for work (to Shakiso for gold mining in Gedeo). Again, not all changes were seen by all as positive. As in a number of other sites, **qhat chewing** was described as a new form of leisure activity amongst young men in Adele Keke/East Harerghe (41) and Gelcha/East Shewa (30). Another innovation was hair straightening, and interviewees noted that changes involving young people following **urban fashions in food and dress** could be costly for the poor (e.g. Adado/Gedeo, 22,23). Others expressed concern that new immodest fashions could be “tempting youth sexually” (Do’oma/Gamo, 165). More practically, however, In Gedeo adult women learned to wear separate skirts and tops, sometimes with trousers underneath, from female students in the Gedeo area, in contrast to the full dresses worn before 2008 (Adado, 22,36).

### New potential for innovation and learning offered by urban centres

There is a widespread perception documented in the WIDE data that **new ideas were coming from urban areas and connections** rather than (just from) government officials or the wereda (e.g. Adado, 27, 32; Harresaw, 197). The **superior teaching-learning experience** of **private schools** in larger urban centres was several times commented on (e.g. Aze Deboa/Kembata, 14). Several students from wealthier families in Adele Keke had graduated from private colleges in Dire Dawa or Harar, which although expensive were thought to provide better teaching and learning than schools in a more rural community where emphasis on education was relatively low, precisely because they offered practical experience for the implementation of taught ideas (Adele Keke/East Harerghe, 138) (*cf.* DB05:education).

Urbanisation in or close to WIDE sites has seen **new services emerge** at most *kebele* centres: places to buy and sell –or even cook- bread, or offering new services for battery charging, torch maintenance and hairdressing; along with a new coffee union and **buildings** in the *kebele* centre (Adado/Gedeo, 5,6,93); or services for mending mobile phones (Somodo/Jimma), bicycles and shoes (Harresaw/East Tigray, 90). In Wolayitta, as Wacha town expanded, the *kebele* deputy chairman reported that the “**acceptance of new arrivals** is now faster than it was” (Gara Godo, 183). As in many places, more successful community members saw young people as likely to be less dependent on their families, and to have wider aspirations (although this is not true of all young people, *cf.* DB04:youth); and their peers as more likely to “expect change and development from individual hard work” (*ibid.*). In Eastern Tigray, for instance, a successful livestock broker (influenced by what he had seen in Atsbi) saw the potential for house and land brokerage, and hoped to be able to **occupy the new urban niche** on an official basis (Harresaw, 90). As noted in DB09:success, livestock plays a key role in innovative diversification from agriculture more widely in the rural economy. Changes in **attitudes to livestock** were visible in many places, including in agro-pastoralist areas where some people had begun fencing their land to keep livestock out (Luqa/Tsemay).

### Mobility and new ideas

Mobility is increasingly important (*cf.* DB08:mobility). Migrants **returning from experiences elsewhere** also brought new ideas and practices (not all of them uniformly seen as positive), although a general impression in several communities seemed to be that migrants tended to return with money or send remittances rather than bring back new ideas (Harresaw/Eastern Tigray, 90). In Eastern Tigray, a roofer had **learned his trade** in Eritrea and returned with it to make a good living, eventually hiring several assistants including his son (*ibid.*, 90). Ventures into mining or for other labour or employ, although often difficult, meant that many had been able to change their lives as a result. In East Hererghe, farmers reported **learning from the neighbouring** Haromaya wereda, which had “more innovative technologies” than its own Kersa wereda (Adele Keke, 5). Meanwhile, richer farmers built houses in Awedey and Haromaya, and **construction design locally had changed** under their influence, with community members also beginning to move new houses closer to the road, having previously feared risk from vehicle accidents (*ibid.*, 10). Finally, since 2010, a **new norm** had emerged of collecting community contributions from those attending celebrations for new graduates (100-200 birr each), to set them up for the future.

**Returnees and remittances from longer distance migration** have often had more profound effects on the home communities, especially communities on the well-trodden routes to South Africa from Kembata and the surrounding areas (Aze Deboa/Kembata, 86ff), and to the Gulf (*cf.* Harresaw and Geblen in Eastern Tigray; as well as several of the Muslim sites in Oromia, e.g. Somodo/Jimma, 134-5). Although **migration in Tigray is widely associated with stopping formal learning** (Harresaw, 21), it was also expected to bring “good things, individually and in the community” including **new access**

to credit (*ibid.*, 109, 190), as well as “some ideas with frightening messages”, as when migrants returning from Muslim countries were thought to have **modified their previous religious values** (*ibid.*, 19). (Cf. DB08:mobility).

### Innovation, gender and changing relations in the family

Lack of economic independence on marriage seems to have driven **increased contraceptive use** in some new families, for instance in Kembata (Aze Deboa, 42). In Gedeo, even a woman in a relatively poor household noted positive **changes in the way children were reared** including attending pre-school **kindergarten** taught by 5<sup>th</sup> grade students, in the Gedeo language, which had not been the case 10 years previously (Adado, 49) and which was considered a potential advantage when they joined school (139). It was also noted that parents did not beat their children as they had done a decade before. **Work for children and young people** continued to be a source of evolution and change. Young children (13 years old and younger) were learning shoe shining or selling sugar cane from older siblings in several sites, especially in the south of the country. Meanwhile, **options for divorced women** seemed to have improved in a number of instances. In Wolayitta, a divorcee was planning to build a new dwelling in her homestead, and open a restaurant (Garo Goda, 155).

Elsewhere, **young women doing seasonal work** in a new coffee washing station, was a recent phenomenon reflecting increased freedoms (Aze Deboa/Kembata, 40, 41), and the presence of the locally founded NGO KMG lobbying against **FGM** had created some discussion (if not yet behavioural change) about a **previously taboo subject** (129). *Iddir*, which were reported to be a relatively recent innovation locally, also provided a forum for these new discussions, as well as for support to those with HIV/AIDS (123). In the same community, *kebele* officials noted that “planning together with the community” was a new trend “highly accepted by the community” and **adopted from NGOs** in the area (133). In Eastern Oromia, **school and girls’ clubs** were having a similar impact (Gelcha, 60). Meanwhile, in Gamo and North Shewa, for instance, campaigns to eradicate various “harmful practices” seemed not to have been entirely successful, despite some impact on social attitudes (Do’oma, 104, 7; Dinki, 19, 20).

The WIDE data also provide ample evidence of **community reflections on different levels of innovation**. Gamo interviewees, for example, described their *kebele* (which is relatively close to Wacha town) as more open to new thinking and modernisation than some of its more “traditionalist highlander” neighbours (Do’oma, 106).

### ...and learning from family members

Women model farmers had in many instances **learned from family members**, as in the case of a widow in Gedeo (Adado, 150,155), who employed three daily labourers, and seemed to regard the DAs and labourers as something of a “learning network.” In East Shewa a dynamic *kebele* deputy was also involved in designing and clearing irrigation ditches – a skill he had learned from his father (Gelcha, 154). Meanwhile a 25-year-old woman had **taken over her husband’s trading business** whilst he was studying at university, and even learned to give animal injections, to meet local demand for administering veterinary drugs (*ibid.*, 160). Family gifts of land and credit were often as critical to innovation as ideas and skills.

- not everyone is in a position to innovate, but those who do draw on **non-technical knowledge and resources**, as well as technical and/or technological skills.

### The impact of religion on community learning, innovation and change

**Religion as a vehicle for new ideas** was a widespread perception, with national and international

spiritual radio programmes in local languages an important vector in at least one protestant site (Aze Deboa/Kembata, 16,159). In another, preachers from the new churches were coming from elsewhere to talk about religion (Adado/Gedeo, 55), and several seemed to feel their religious practice was changing under urban influence, with the **new religions better than the old ones** (*ibid.* 17). A community member who had gone to Dilla for training was now a pastor in the local church; religious rules had become more strict which some young people liked (55, 170), and a new *Tsega* church had introduced **speaking in tongues** (22); others felt the churches were paying more attention to **“teaching the community better than in the past** about married life, family, etc.” (151), with the Bible was seen as a positive source of wisdom for several protestant communities. In Wolayitta, meanwhile, the *Hawariyat* church was in the process of **removing holidays** from its annual religious activities, in order to inculcate a **culture of hard work** for food security (Gara Godo, 183).

In other areas meanwhile, there was **resistance to religious change or conversion**, which was “changing the history of the community” (Luqa/Tsemay, 27) and advocating new social norms (44); with some pioneers even threatened with being outcast (49) - an attitude that seemed to be eroding.

### The roles of trade, status, and ‘networks of success’ in promoting innovation

People regarded by others as successful innovators were often nothing to do with the *kebele* or system of models, but the ability of individuals to innovate often correlates with access to a wide range of resources. Innovation often reflects a growing **entrepreneurial awareness** amongst individuals in rural areas that connects with **emergent inequality**. The wealth of rural evidence of successful informal adaptation and innovation indicates change was as much a function of **socio-economic resources, openings and opportunities** as of new attitudes – especially amongst young people, and in economically more dynamic communities.

- Governmental approaches emphasising a combination of social (inter)action and learning through institutionalised systems of demonstration or models have had considerable success, but **approaches to “attitude change” need careful nuancing**.

Opportunities often multiplied with innovation and accumulation. Family members of the **economically successful** were often more able to innovate: thus, the wife of a wealthy household (with a latrine, concrete floored house, and new sofa) was making a good income from a **shop and beauty salon** opened on the roadside three years before the research (Aze Deboa/Kembata, 14). Those **well networked with trading links** were also in a good position: thus, for instance two business people and their families in Gedeo were involved in selling hides and skins, soft drinks, and running a bakery with retail into Dilla town and across a range of outlets. Their **trading networks** supported further innovation:

*Trade by itself is a channel to contact many people, and through it linkages increase and this leads to co-operation. People in the network are good to support each other. For instance if I lack money to finance trade for a particular profitable product, there is an opportunity to contact one of the [other] traders and get money. (Businessman, Adado/Gedeo, 155)*

**Different kinds of traders were associated with innovation, evolution and change** in many communities: coffee and livestock traders in Durame (Aze Deboa/Kembata, 69) along with other small businesses – all of whom had started **using their own or family capital rather than credit** (*cf.* DB09:success). In the South Omo site, where there had also been abrupt changes with the advent of roads, electricity, and the mobile phone network, significant shifts in livelihoods, and patterns of food and dress were also associated with the **beginnings of trade** (both livestock and petty trade), and the introduction, in 2009, of sesame as a **cash crop** (Luqa/Tsemay, 18).

In other cases, innovators were **party or kebele members**, but pursued ideas for new businesses, which they had developed independently, through formal channels. In Adele Keke, an imam who had worked as a traditional healer for 10 years since being trained by another traditional healer, wanted to get permission from the government to pursue the work officially (Adele Keke/East Harerghe, 180). In a number of cases, TBAs who had trained themselves informally by learning from their parents (Do'oma/Gamo, 157; Gelcha/East Shewa, 161) or peers (often after traumatic childbirth experiences of neighbours or family members (Adele Keke/East Harerghe, 182)), were also involved in formal HEW programmes (*cf.* DB06:*maternity*). Where innovation was visible to other members of the community, **innovators were held in relatively high esteem**, as sophisticated members of the society, with wider horizons: in Eastern Tigray, for instance, the research concluded

*the educated opinion leaders are ex-fighters and people who have a religious school background and modern education. They are fast to accept new changes and mobilize the community. They had exposure to other places. (Harresaw, 181)*

WIDE evidence, then, indicates that there is no shortage of innovative behaviour or creative attitudes in rural areas.

- Government approaches through formal demonstration or models are not the only – or indeed often the most important - sources of innovation and change locally.

### Conclusion: support that enhances innovation in diverse communities

All of the other discussion briefs in this series make detailed sectoral recommendations for government support that enhances positive change and innovation. Given the focus placed by government on the **transformation of the attitudes, technologies and wealth** that define the rural economy, the efficacy and responsiveness of governmental systems and institutions is key. Governmental and other external interventions can have a strong impact enhancing the scope and potential for identifying and encouraging innovation: nevertheless

*[...] it also matters who is doing the looking [for innovative outliers who succeed against the odds, and the lessons from their positive deviance]. **The community must make the discovery itself – it's no use external 'experts' coming in, spotting [positive deviance] and turning it into a toolkit.** [...] PD means learning to 'spot the novel in the familiar' [...] (Duncan Green, 2016)<sup>x</sup>*

The literature on positive deviance and interpretive policy analysis may point to further lessons in interpreting the diverse and multiple pictures that emerge from the WIDE data, in terms of their policy implications. This very diversity and complexity suggest that new **paradigms as to how best to support the creativity of rural populations may be needed**. Working only through a hierarchy of “modern expertise” and “technology transfer” may be more likely to obscure than to illuminate the ways in which socio-economic transformation occurs. As Duncan Green recently put it,

*Upending hierarchies is the most important lesson of all in unleashing the power of community innovation. (op.cit.)*

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High Level Discussion Forum. It does not represent the views of EDRI, the Government of Ethiopia, or the financing Development Partners, but is intended to stimulate policy discussion. The other Series II Discussion Briefs and other research products are available at <http://ethiopiawide.net/>.

<sup>ii</sup> Ege, Svein (2015) 'The New Economy: Agricultural Transformation in North Shāwa, Ethiopia,' Paper presented at the 19th International Conference of Ethiopian Studies, Warsaw 24-28 August 2015.

<sup>iii</sup> See for instance Gates, Bill (2012) 'Exciting innovations in agriculture and health' GatesNotes, 8 May, available at <https://www.gatesnotes.com/Development/Ethiopia-Exciting-Innovations-in-Agriculture-and-Health>

<sup>iv</sup> The series of discussion briefs presented together with this one cover innovation in relation to a range of specific policy areas, including migration, labour, and economic successes; attitudes to gender relations and youth transitions; changing rural-urban dynamics, etc.. Particularly important cross-linkages are noted in the text.

<sup>v</sup> Yinager Dessie Belay (2012) 'Assessing the role of social learning, institutions and social capital for soil conservation in Northern Ethiopia', PhD submitted to the University of Vienna, available at [http://www.boku.ac.at/fileadmin/data/H04000/H16900/Resources/Scientific\\_Pub/Yinager\\_Dessie\\_Belay\\_2012\\_.pdf](http://www.boku.ac.at/fileadmin/data/H04000/H16900/Resources/Scientific_Pub/Yinager_Dessie_Belay_2012_.pdf); the argument cited here makes reference to Rölling, N. (2009) 'Conceptual and methodological developments in innovation', in Sanginga, P., Waters-Bayer, A., Kaaria, S., Njuki, J., Wettasinha, C. (eds), *Innovation Africa: enriching farmers' livelihoods*, London: Earthscan, pp.9-34.

<sup>vi</sup> Numerals throughout refer to page numbers in WIDE3 community profile documents, researched 2010-2013.

<sup>vii</sup> Party members reported that they "learned about GTP and other newly introduced or planned interventions" (Adele Keke/East Harerghe, 145; Aze Deboa/Kembata, 123; Gelcha/East Shewa, 35; Harresaw/Eastern Tigray, 196; Luqa/Tsemay, 64,106), often "from what they read" (e.g. Adado/Gedeo, 183) with newsletters and cell discussions key to this process across communities. General meetings of the *kebele* had also been introduced in several of the WIDE sites, and were seen as useful "when new things come," where previously some externally driven innovation had been seen as confusing for the community (e.g. Adado/Gedeo, 183).

<sup>viii</sup> DB-E: *Models*, on 'Models and Realities of Transformation in Rural Ethiopia,' recommends addressing the issue of over-concentration of kebele-level responsibilities in a relatively few (often overburdened) hands; strengthening mechanisms for the engagement and participation in decision-making of women and youth (also advocated in DB04: *youth*); examining the skills, responsibilities and relationships around the pivotal role of the *kebele* manager; and (most importantly) revisiting what seems often to have been the relatively limited efficacy of the system of "models" in reaching across and into the wider community.

<sup>ix</sup> Cf. Pascale Sternin & Sternin (2010) *The Power of Positive Deviance: how unlikely innovators solve the world's toughest problems*, Boston: Harvard Business Press

<sup>x</sup> Duncan Green (February 2016), review of Pascale *et al.* (*op.cit.*) available at <http://oxfamblogs.org/fp2p/book-review-the-power-of-positive-deviance/>