THE GDR INSIGHT MULTIPLIER

With The GDR Insight Multiplier, Global Data Resources ensures that partners and advertisers can access high-quality, data-driven consumer insights, even in Survey-Poor Countries.

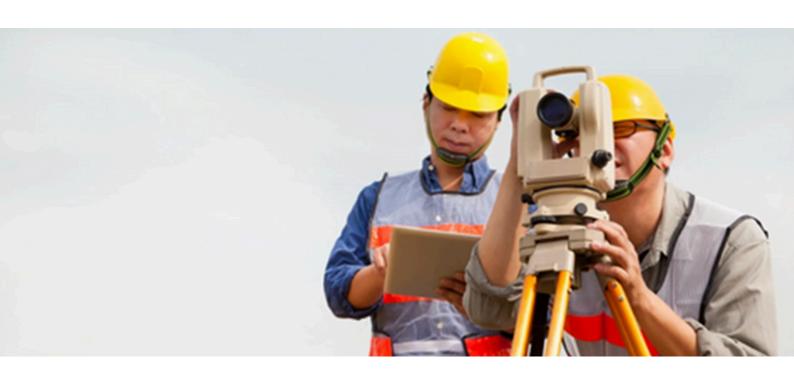**Offered & Developed By**

THE GDR INSIGHT MULTIPLIER

THE FUTURE OF DATA-DRIVEN INSIGHTS

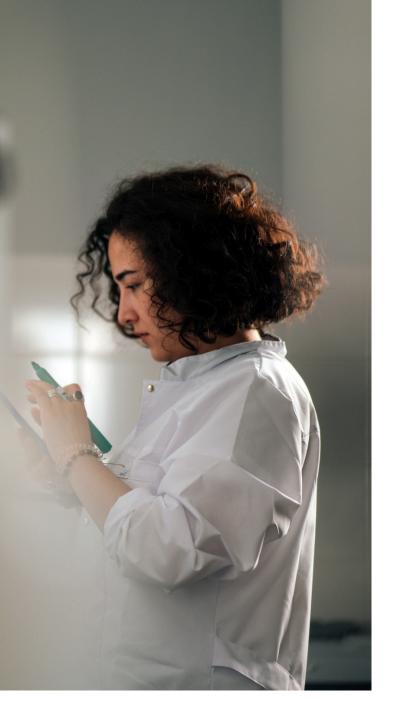## EXPANDING CONSUMER INSIGHTS IN SURVEY-POOR COUNTRIES

OVERVIEW

At Global Data Resources, we work with **high-quality survey providers** whenever possible to ensure the most accurate and granular consumer insights.

However, in survey-poor countries, where survey data is unavailable or of low quality, we use the GDR Insight Multiplier - **our AI-driven modelling system** - to reliably and at scale extrapolate insights.

The GDR Insight Multiplier expands survey-based insights into survey-poor markets by utilizing advanced machine learning, Bayesian modelling, and proprietary AI techniques.

At its core lies **The GDR InsightFusion Algorithm (IFA)**, our unique meta-model that intelligently integrates multiple predictions to **guarantee the highest degree** of accuracy and market alignment.

HOW IT WORKS

1. HIGH-QUALITY DATA INPUTS (CONSUMER CLASSIFICATION)

To ensure accuracy, we use **GDR's Consumer Classification (CC) data**, which is consistently available across all markets.

THIS INCLUDES
- **Demographics**: Age, household size, education level.
- **Economics**: Income, employment type, property ownership.
- **Geo-Segmentation**: Urban vs. rural, regional economic conditions.

In Survey-Rich Countries, we have direct survey-linked data connecting CC to consumer interests.

In Survey-Poor Countries, we apply The GDR Insight Multiplier to predict these interests.

2. TRAINING THE MODEL WHERE SURVEYS EXIST

Using survey-rich markets, we train three AI models to learn the relationship between CC data and consumer interests:

1) XGBOOST/CATBOOST (GRADIENT BOOSTING)
- **Finds complex interactions** between consumer traits and interests.
- **Strength**: High predictive accuracy with clear feature importance.

2) RANDOM FOREST (DECISION TREE ENSEMBLE)
- Averages multiple decision trees for **robust predictions**.
- **Strength**: Reduces overfitting and works well with structured tabular data.

3) NEURAL NETWORKS (DEEP LEARNING)
- Identifies **hidden patterns** in high-dimensional data.
- **Strength**: Best for detecting deep behavioural trends.

3. PREDICTING INTERESTS IN SURVEY-POOR COUNTRIES

Once the models are trained, we use them to **predict soft interests** in Survey-Poor Countries by applying insights from **similar** consumer classification segments.

PROBABILITY SCORES

Each model generates probability scores for different consumer interests (e.g., car brand preference, tech adoption, travel habits).

4. THE GDR INSIGHTFUSION ALGORITHM: PROPRIETARY AI FOR ACCURACY

At the heart of The GDR Insight Multiplier is The GDR InsightFusion Algorithm (IFA), our proprietary AI-driven meta-model that refines predictions for maximum accuracy.

WHY THE GDR INSIGHTFUSION ALGORITHM IS UNIQUE

- **Proprietary AI methodology** that intelligently combines multiple predictions.

- **Adaptive weighting** ensures the best balance across different models.

- **Continuously improves over time** with new data inputs.

HOW IT WORKS

STEP 1
The three AI models make separate predictions.

STEP 2
The GDR InsightFusion Algorithm blends their outputs using:

- **Averaging**: Simple mean of all predictions.
- **Weighted Voting**: Assigns more weight to the most accurate model.
- **Stacking (Meta-Modeling)**: Uses a Logistic Regression layer to optimize prediction blending dynamically.

MOST ACCURATE REPRESENTATION

This ensures that the final insights are **the most accurate representation of consumer behaviour**, even without direct survey data.

5. BAYESIAN ADJUSTMENT FOR LOCAL MARKET DIFFERENCES

BAYESIAN ADJUSTMENT

To further refine our predictions, we apply Bayesian updating to incorporate **real-world sample market** data:

- **Car brand registrations** (government/industry reports).
- **Google Trends & social media sentiment** (regional interest signals).
- **Third-party market research** (e.g., Kantar, Nielsen, automotive reports).

This ensures that predictions reflect real-world variations **across different markets**.

6. INDEPENDENT VALIDATION WITH EXTERNAL DATA

INDEPENDENT VALIDATION

To verify accuracy, we compare predicted consumer interests against:

- Official car brand sales and registrations.
- Geo-spatial.
- Real-estate sales data.
- Market research and third-party reports.

If any discrepancies arise, we **recalibrate the model** to improve alignment.

FINAL OUTCOME

WHY THIS MODEL MATTERS

EXPANDS INSIGHTS GLOBALLY
Converts survey-driven learnings into predictive intelligence for new markets.

PROPRIETARY AI
The GDR InsightFusion Algorithm ensures the most accurate and market-aligned predictions.

PRIVACY-SAFE
No personal tracking, only aggregated neighborhood-level insights.

CONTINUOUSLY IMPROVES
Refines itself as new data sources become available.

Step	Method	Purpose
1. HIGH-QUALITY DATA INPUTS	Use Consumer Classification (CC) across all countries.	Establish a uniform foundation.
2. MODEL TRAINING	Train XGBoost/CatBoost, Random Forest, and Neural Networks in Survey-Rich Countries.	Learn the relationship between CC and soft interests.
3. PREDICTIONS IN SURVEY-POOR COUNTRIES	Apply trained models to markets without survey data.	Generate probability scores.
4. THE GDR INSIGHT FUSION ALGORITHM	Proprietary AI-driven meta-model.	Optimally blends multiple predictions for maximum accuracy.
5. BAYESIAN ADJUSTMENT	Reweight predictions using real-world data.	Ensure predictions reflect market-specific conditions.
6. INDEPENDENT VALIDATION	Compare with car registrations, Google Trends, and market reports.	Verify model credibility.

THE FUTURE OF DATA-DRIVEN INSIGHTS

With The GDR Insight Multiplier, GDR ensures that partners and advertisers can access high-quality, data-driven consumer insights, even in **Survey-Poor Countries**.