Causal Model for FSHS Support

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```
# Loading the data
library(haven)
```

```
## Warning: package 'haven' was built under R version 4.3.3
```

```
clean_data <- read_dta("~/GitHub/ppol1802/clean_data.dta")


# Convert labeled variables back to factors
clean_data <- as_factor(clean_data)
```

1. Theoretical Model

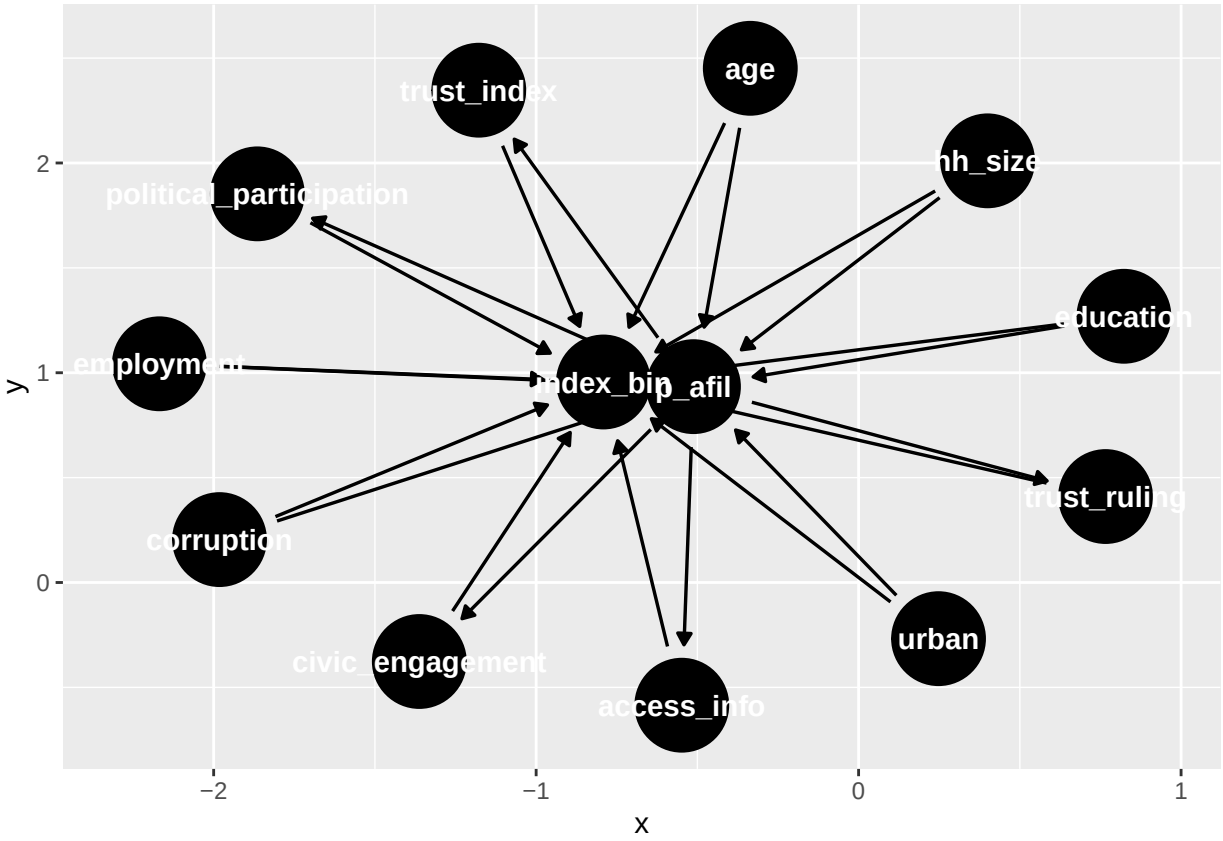
This model examines the relationship between partisanship (`p_afil`) and support for Ghana's Free Senior High School (FSHS) (`index_bin`). It includes confounders, mediators, and potential colliders.

```
dag <- dagitty('dag {
  p_afil -> index_bin
  p_afil -> access_info -> index_bin
  p_afil -> civic_engagement -> index_bin
  p_afil -> trust_index -> index_bin
  p_afil -> political_participation -> index_bin
  p_afil -> trust_ruling -> index_bin

  hh_size -> index_bin
  hh_size -> p_afil
  age -> index_bin
  age -> p_afil
  urban -> index_bin
  urban -> p_afil
  employment -> index_bin
  employment -> p_afil
  corruption -> index_bin
  corruption -> p_afil

  education -> p_afil
  education -> index_bin
}')
```

```
ggdag(dag)
```



1. Confounders

- **hh_size** (Household Size)
- **age**
- **urban** (Urban or Rural location)
- **employment** (Employment status)
- **corruption** (Perception of Corruption)

2. Mediators

- **access_info** (Access to information which is an index from a battery of questions from radio, TV, newspaper, internet, media)
- **civic_engagement**(An index from a battery of questions that depicts civic engagement: protesting, attending community meeting, contacting traditional leader, contacting local government, raising issues)
- **trust_index** (Trust in institutions is an index created from a battery of questions on trust in presidency, court system, parliament, electoral commision etc.)

- **political_participation** (An index from a battery of questions that depicts political participation: voting, disucssion of politics, attending rallies, contacting political party officials)
- **trust_ruling** (Trust in ruling party)

- **education** (No primary education, primary, secondary and tertiary)

Collider

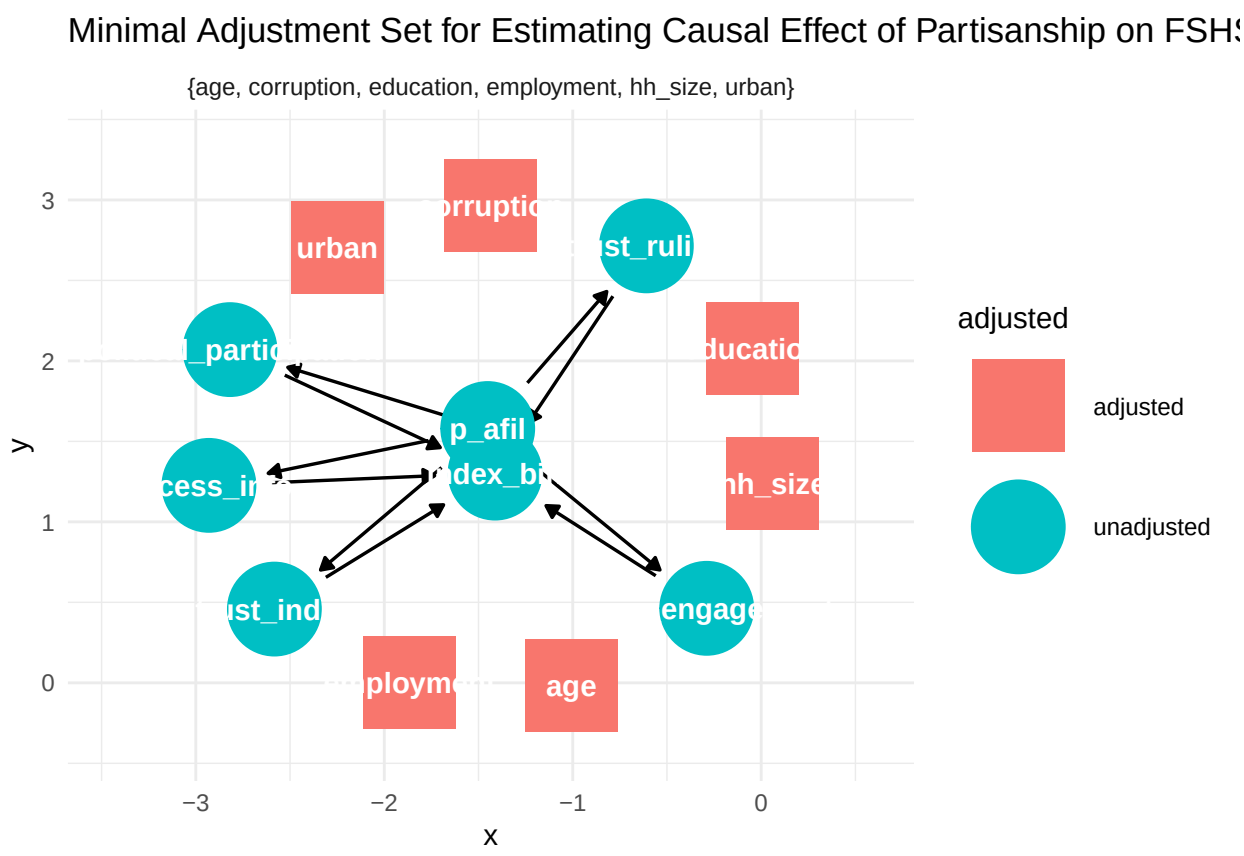
- Didn't find any collider unfortunately.

3. Identify Minimal Adjustment Set

```
adjustmentSets(dag, exposure = "p_afil", outcome = "index_bin")
```

```
## { age, corruption, education, employment, hh_size, urban }
```

```
# Highlighting the minimal adjustment set in the DAG
ggdag_adjustment_set(dag, exposure = "p_afil", outcome = "index_bin") +
  theme_minimal() +
  labs(title = "Minimal Adjustment Set for Estimating Causal Effect of Partisanship on FSHS Support")
```



Description of the Minimal Adjustment Set

The **minimal adjustment set** consists of the **confounding variables** that we need to **control for** to estimate the causal effect of `p_afil` (partisanship) on `index_bin` (support for FSHS) **without bias**.

- **`age`**: Older or younger individuals may have different perspectives on FSHS.
- **`corruption`**: Perception of corruption could influence both trust in government and policy support.
- **`education`**: Higher education levels might impact both political alignment and views on FSHS.
- **`employment`**: Employment status affects economic perspectives, which may shape policy support.
- **`hh_size`**: Household size may influence economic strain and support for education policies.
- **`urban`**: Urban vs. rural residence can shape access to information and political views.

Since **these variables confound** the relationship, they need to be **adjusted for**, or controlled for.